

Mirroring A Green Image

Clean technology translates into greater cost efficiency at Samcor

FES BUREAU

THOUGH Samcor Glass Company hasn't any environmental awards to its credit, yet its track record on adopting green practices is enviable. Operations at its Kota plant are guided by the company's environmental policy, a facility-specific environmental management system and a monthly environmental reporting system.

A technological investment of Rs 1 crore on water treatment plus other expenses incurred on conducting environmental education and awareness programmes among employees and surrounding villages, on pollution control, and on creating water harvesting infrastructure have translated into an improved bottomline for the company—through greater cost efficiencies (as a result of reduced input consumption and waste generation), longer product life cycles, greater production efficiencies and enhanced corporate image (among suppliers, buyers, employees and locals).

While the Kota plant complies with all the relevant national regulation, in some areas—such as permissible level of bio-chemical oxygen and allowable discharge of treated effluent—the plant actually goes beyond Indian standards and meets global performance standards. Programmes such as reusing batch waste and electrostatic precipitator (ESP) dust along with raw material have set an example for Samcor's collaborators.

Although Samcor hasn't won any environmental or sustainable development awards, it has in place a number of programmes and initiatives related to the environment such as its water conservation programme, water harvesting programme, and tree plantation programme. Through these practices, the company has tried to deal with the water scarcity problem plaguing the drought-prone state of Rajasthan. Its pollution control efforts have been centred around tackling air and water pollution—an ESP at its glass furnace and bag filters at the

minimise generation of particulate matter.

Separate waste water treatment plants for abrasive water, cullet water, and chrome water achieve two goals, that of reduction of water pollution and conservation of scarce resources. This is because the treated water from the abrasive water and cullet water treatment plants are reused in production, while the water from the chrome water plant is used for gardening purposes, which saves on use of additional water for this purpose. And a sewerage water treatment plant (here too, water is reused in the gardens) and an effluent treatment plant, which uses innovative technology of reverse osmosis, help achieve solid waste management best practices.

Samcor's eco-friendly measures are a role model for other industries, too

Apart from water conservation efforts, Samcor has implemented other practices which help in waste reduction. Waste material generated during production—both hazardous and other industrial waste like plastic

and polythene—is either reused, disposed off to recyclers authorised by the Ministry of Environment and Forests, or stored in an isolated place within the plant premises as per prescribed standards. Reuse of old packaging, ESP dust, etc, while reducing waste generation has helped in conserving resources, as do other environment management programmes which focus on reduced consumption of water, chrome, natural gas, pumice powder, and other usables. To save power, Samcor utilises AC drives in drive motors which reduces ampere consumption as per load requirement.

Samcor's adoption of environment-friendly technologies to reduce and prevent pollution as well as initiatives aimed at waste reduction are applicable for other industries as well. In fact, some units among the Samtel group companies are working on these programmes.

Samcor Glass Company was the first runner-up for the TERI Corporate Environmental Award in Category 1 (for companies with turnover under Rs

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MUMBAI

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India could look forward to FIs in climate change mitigation

CHENNAI

INDIA can look forward to substantial foreign investments and useful partnerships from developed countries in the area of climate change mitigation initiatives, Union Minister for Environment and Forests T R Baalu said on Saturday, reports PTI.

"As most of the investor countries have been looking for abatement of greenhouse gas (GHG) and cost of abatement being cheaper in developing countries, we can hope for additional foreign investments and partnerships from developed nations for climate change mitigation," he said at a conference on "Climate Change: Issues and opportunities" here.

Such tie-ups might bring in efficient technologies besides partial or full funding, he said adding the Indian industry should seize these opportunities in the right earnest.

Baalu said energy security concerns in the backdrop of climate

change called for diversification and enhancement of access to alternative energy resources.

"Energy security is critically linked to climate change since economic supply of alternate energy sources other than coal, which is the most carbon intensive fuel, can reduce the energy intensity," he said adding substitution of coal with low carbon-intensive fuels like natural gas and carbon-free sources like renewable energy was the need of the hour.

The conference was organised jointly by the Federation of Indian Chambers of Commerce and Industry (FICCI), Tata Energy and Resources Institute (TERI), and the Ministry of Environment and Forests.

Stressing that there was a need for all concerned to be sensitised on climate change issues in the Indian context.

Baalu said regional concerns should be focused for an in-depth study of vulnerability to climatic

changes and adaptation of strategies to tackle the same.

He said the eighth conference of parties to the United Nations Convention on Climate Change to be held in New Delhi in Oct-Nov next would be an excellent opportunity to reflect, consider and debate on the concerns and opportunities of the industry on this issue.

He said the UN convention was a global effort to stabilise the green house gas concentrations in the atmosphere at safer levels that would prevent dangerous anthropogenic interference with the climatic system.

He said industry had a very important stake in climate change matters since it contributed half of the global greenhouse gas emissions.

Baalu said economic security, food, water, energy and environment were the four pillars of development. He said the six critical areas which should be given attention in the context of sustainable development and climate change were:

Govt Mulls Cess On Energy To Kickstart India Power Fund

ANUPAMA AIRY

New Delhi, June 20

The government is evaluating various options such as levying a cess on power or other energy products like oil, gas and coal (as is being done for the Central Road Fund) besides diverting annual dividends of central power PSUs for mobilising resources for the proposed \$1 billion India Power Fund (IPF)

Senior government officials told *FE* that detailed discussions on structuring of this fund along with resources mobilisation options were held at a meeting convened last week by power minister Suresh Prabhu and secretary power RV Shahi with PFC's brass and other ministry officials

IPF will be a dedicated fund for the development of power sector and will be administered

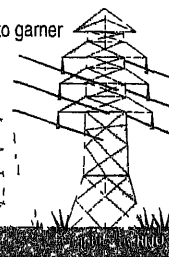
POWERFUL OPTIONS

Diverting annual dividends of central power PSUs to garner additional monies for India Power Fund

• Taking IPF corpus to \$5 billion within five years of creation

Structuring IPF as an equity investment fund under an asset management company

• Asking selected merchant banker to come out with a workable model for IPF



by Power Finance Corporation (PFC). The corpus of this fund will be raised to \$5 billion within five years of its creation, say sources

Officials said PFC had proposed to structure IPF as an equity investment fund (EIF) under an asset management company. According to PFC representation in the ministry, EIF can subscribe to equity issue of new plants as well as

investment in existing plants

"The EIF can have inflows from a cess on use of energy products, participation from multilateral institutions and financial institutions, mutual fund units for retail investors, participation from power utilities, developers and suppliers besides reployment of dividend income and capital gains," says the PFC presentation

Sources said that even

though PFC had suggested this model for IPF, the nodal ministry had asked it to consult leading merchant bankers for formulating a workable model for this fund. When contacted, PFC officials said the corporation would shortly seek advice from leading merchant bankers including SBI Caps, Merrill Lynch, JP Morgan and others

"We will shortly appoint a leading merchant banker who will help the corporation in proper structuring of this product", chairman and managing director, PFC, AA Khan told *FE*

Asked to comment on the setting up of this fund, chairman

Infrastructure Development and Finance Corporation (IDFC) Deepak Pankh said, "I think whatever we can do to improve the power situation, as it stands today, is

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vt Mulls Cess On Power To Kickstart India Power Fund

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welcome The situation is so critical and the shortage of funds is so acute that whatever steps we can take such as creation of this fund must be done Even the multilateral agencies can be asked to contribute towards this fund," he said

Says the Director General, Tata Energy Research Institute, Dr RK Pachauri, "as a concept, it is fine But what we need to ensure is that the funds are used in an efficient manner with proper monitoring and project appraisals Unless there is substantial progress on the reforms side at the state level, such funds will not succeed So the reform process should go hand in hand with the generation efforts by the government by creating such funds"

The ministry of power has an ambitious target of one lakh megawatt of

generation capacity by 2012 Going by the current price levels of Rs 8 crore per megawatt for new capacity, this translates into an investment of Rs 8,00,000 crore This would annually require a capacity addition of 10,000 mw and investment of around Rs 80,000 crore

As against this, the current investment rate is around Rs 15,000 to 25,000 crore per annum The IPP growth is also not satisfactory and the sectoral weakness is restricting financing options and costs of funding Even FIs like IDBI, IFCI and ICICI have decided to reduce lending to power sector This will have a direct impact on funds availability and growth of the sector It is in this background that the proposal to set up this dedicated fund for the power sector was mooted

Don't Dilute NPA Ordinance: Economists

OUR ECONOMIC BUREAU

New Delhi, July 13

Eminent economists, while speaking at the Prime Minister's Economic Advisory Council meeting here on Saturday, asked the government not to dilute the ordinance for recovery of non-performing assets (NPAs) and restrain from derailing the administered price mechanism (APM) dismantling in the petroleum sector. The economists, however, endorsed the government's initiative in the power sector and pleaded for increasing public investment.

Addressing the economists, Prime Minister Atal Bihari Vajpayee unveiled an eight-point agenda to push economic growth to eight per cent in the Tenth Plan and speed up economic reforms so that "India becomes a clear-cut market economy." The agenda includes better targeting of subsidies, speedy implementation of policies and creation of employment opportunities.

Finance minister Jaswant Singh, who briefed newsmen about the meeting, said that the government will take steps to boost savings but continue the soft interest rate regime. Mr

Improve 'at or policies and programmes
Speed up economic reforms, the government
Adhering from production savings a re
clearly specified strategic sectors

- ▶ Govt to shoulder dominant, though not exclusive responsibility for physical and social infrastructure
- ▶ Speed up employment-oriented growth
- ▶ Remove imperfections plaguing financial markets
- ▶ Channel higher rate of savings into productive investments
- ▶ Reduction and retargeting of subsidies to reduce overall fiscal deficit
- ▶ Barring few who deserve subsidy, make others pay for what they use
- ▶ Govt to launch initiative for accelerated completion of railway projects that are critical and remunerative
- ▶ Align long term growth strategy to population, encourage demographic transition



reduction in interest rates will not lead to lower savings

Members of the council, including Dr Ashok Lahiri, Dr Kirit S Parikh, Dr RK Pachauri, Dr VS Vyas and Dr Rakesh Mohan, wanted the government to impose proper user charges for further reforms in the electricity sector and make electricity regulation more transparent. The economists, however, were intrigued that Prime Minister's opening statement did not mention anything about poverty alleviation programmes.

Mr Singh told reporters that

minimum support price (MSP) scheme for agricultural crops, but will adopt "step by step" approach to reduce subsidies. He added that the Centre will work in tandem with the state government for better targeting of subsidies.

Speaking at the meeting, Dr Parikh urged the government to introduce a system of subsidy to prompt the private distribution companies to rapidly reduce distribution losses. He said that the subsidy scheme, which may be spread over three to five years, will also ensure that power tariffs are retained at the present level.

PM Pats Selloff Process

OUR ECONOMIC BUREAU

New Delhi, July 13

Strongly endorsing the privatisation process, Prime Minister Atal Bihari Vajpayee on Saturday said the disinvestment initiatives have resulted in a transparent and non-discretionary procedure, which is a model of good governance.

In his opening remarks at the meeting of the Prime Minister's Economic Advisory Council, he said the successful completion of a number of divestments is one of the examples where "the gap between promise and performance" has been bridged.

Yet, "we are aware that a lot more needs to be done," Mr Vajpayee said. "If you were to ask me, 'What is your first priority?', I would say that it is to improve implementation capabilities across the board in the government."

On Wednesday, too, the Prime Minister had strongly defended the privatisation

process. He had said, "Apprehensions on security of employment after disinvestment have been shown to be without foundation." This was a timely defence of the divestment programme, because a few days earlier defence minister and NDA convener had said that privatisation would lead to loss of jobs.

In fact, Mr Vajpayee had said on Wednesday that the process of divestment "has now crystallised into a transparent, non-discretionary process. The proceeds have exceeded the most optimistic expectations. It has also appreciably increased the value of PSU equities."

The Prime Minister had categorically remarked that the government would "further accelerate disinvestment" in PSUs, except those in the strategic sectors. It will also "relinquish government involvement in production" and raise resources for development of the social sector. ♦

Don't Dilute NPA Ordinance: Economists

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"This was essential for success of power reforms," said Dr Parikh.

He also urged the government to step up public investment, especially in the railways sector. "At a time when the focus is on the roads sector, we can't neglect railways," he said. Dr Parikh also made a case for expediting pending labour reforms and pushing bills like SICA in Parliament.

The Prime Minister in his opening remarks said that although government should withdraw from production barring a few clearly specified strategic sectors, it must "retain and further strengthen its role in policy making, regulation and facilitation." Mr Vajpayee said "we need to ensure that regulation of market is by competent and independent regulatory agencies."

The Prime Minister added that the government will take steps to remove several growth-hindering hurdles that have been placed in the name of environmental protection.

Implementation of the new telecom policy, promotion of the information technology sector, progress on the national highway development project as also the disinvestment initiative were a few examples of a model of good governance, he said, but cautioned "we are aware that a lot more needs to be done."

Mr Vajpayee said government had begun a compre-

hensive review of the current regulatory procedures which impose significant transaction costs and delays in project implementation, adding that a high-level official working group under the industry secretary would soon recommend concrete steps to re-engineer the entire set of regulatory processes at the central, state and municipal levels.

Stressing the need for reducing the overall fiscal deficit, Mr Vajpayee said that the essential element of poverty alleviation strategy would have to be reduction and re-targeting of subsidies. "Barring those who deserve a subsidy, we should develop a culture of making all others

pay for what they use," he said.

Mr Vajpayee regretted that nearly half of the power sold was not billed and much of what was billed was not collected. "More or less this is true about higher education, public transport, municipal services and so on. No reform can succeed if this sad state of affairs persists," he cautioned.

The Prime Minister announced that government would soon launch an initiative for accelerated completion of railway projects which are both critical and remunerative. "If necessary, we will raise non-budgetary resources for this purpose," he added.

Mr Vajpayee said that the government has taken up the report "Targeting 10 Million Employment Opportunities Per Year", submitted by the Planning Commission member S P Gupta, adding government would soon prepare an action plan to implement its salient recommendations.

Apex industry chambers Federation of Indian Chambers of Commerce and Industry (Ficci) and Confederation of Indian Industry (CII) welcomed the PM's agenda for 8-per cent growth. CII president Ashok Soota said "this could become the foundation for a strong economic revival and a sustained growth path." ▲

Recycling Water To Churn Profits

Shriram Alkali sets an example in cutting down on water consumption—and improving its bottomline

FES BUREAU

WHEN Shriram Alkali & Chemicals (SAC) won the TERI Corporate Environmental Award last year, it was not the first return for its green practices. The company makes an annual saving of Rs 10 lakh by employing environmental friendly initiatives.

SAC operates in Jhagadia (Bharuch) in Gujarat. With an employee strength of 181 and an annual turnover of Rs 8.8 crore, it mainly produces chemicals, including caustic soda, chlorine, hydrogen, hydrochloric acid and sodium hypochlorite.

SAC has both an environmental policy and an environmental cell at the facility level. The environmental management system (EMS) is in place at the facilities of DCM Shriram Consolidated at Kota, Alwar and Tonk in Rajasthan; Jhagadia in Gujarat, and Shahjahanpur in

Uttar Pradesh

SAC appraises its efforts on environmental protection in its annual reports and has to its credits environmental and sustainable development-related awards in the past five years of its operation at Jhagadia. It has won the National Energy Conservation Award in the chlor-alkali sector given by the power ministry for two years running. The National Energy Conservation Award and two awards for unique and innovative efforts in energy conservation, given by the government of India, also testify to its leadership in this field.

SAC has successfully implemented various schemes aimed at reducing effluent generation, thereby promoting water conservation. Recycling laboratory samples, such as brine, caustic soda, etc., to be reused in the plants is a major initiative taken up by the company. Similarly, SAC saves

water by filtering boiler wash water and reusing it for boiler cleaning. The company saves Rs 2 lakh per annum by using the discharge of alkaline process condensate as boiler feed water, which reduces the need for fresh DM water production by 13,000 kl per annum.

SAC, by successfully identifying problem areas and taking corrective measures, has been able to reduce the total effluent generation. One of the many ways by which this was made possible was by segregating some of the effluents into acidic and alkaline streams and using them as a substitute of hydrochloric acid for barium chloride preparations and also as a substitute of sodium hydroxide in the brine reactor. It has been able to prevent pollution by reducing venting of hydrogen, which is used as a fuel supplement, and by selling the excess

SAC further reduces its effluent generation by using 'zero liquid discharge' technology.

research and technological innovation, it has achieved zero waste generation from ion exchange column resin regeneration, the waste of which is being used for barium chloride production.

With successful implementations of various innovative methods, SAC has reduced effluent generation from 3.8 m³/T to 0.7 m³/T of caustic soda. This reduction has led to reduced water consumption by 140 cubic mt per day, which has resulted in a saving of Rs 8 lakh per annum. Much of this change was brought about by waste segregation and recycling, which are simple but effective means and can be easily emulated by other industries.

The company, in its effort to help the environment, has invested Rs 20 lakh in rain

water harvesting. The initiative is aimed not only to save fresh water but also to recharge ground water and provide better quality raw water to generate less quantity of effluent.

SAC has also been able to carry out effective energy conservation through reduced consumption of furnace oil from 2.5 m³/T to 1.5 m³/T. With good housekeeping, the company has been able to reduce its electricity consumption by 10% by modifying transformer so that secondary voltage is same as operating voltage and changing of transformer from 30 to 8 MVA. Steps like using steam from waste heat recovery to heat HFO before feeding into FO separators, installation of voltage variable frequency drive, insulation of clarifiers, and switching off idle transformers also helped in energy conservation. The company has also been effectively using office waste paper by selling it or using

it as packaging material.

Apart from these efforts at energy and water conservation, SAC also plays an active role in community development activities. Free medical camps are organised on a periodic basis in surrounding areas, where doctors take part. The company has also introduced a professional education scholarship scheme for needy students of Jhagadia with 30 scholarships being offered. In the aftermath of the Gujarat earthquake, SAC has done its bit to help the affected by constructing the first earthquake proof building for a girls' primary school at Galpadar in Gandhidham, the complete cost of which was around Rs 18 lakh.

Shriram Alkali & Chemicals won the TERI Corporate Environmental Award in Category I (for companies with turnover under Rs 100 crore per annum) last year.

Pachauri Wants IMD To Study Impact Of Climate Change On Weather Pattern

OUR ECONOMIC BUREAU

New Delhi, July 8

The India Meteorological Department (IMD) should set up a separate cell to study the impact of global climate change on weather pattern and monsoon rains in the country, said the chairman of Inter-governmental Panel on Climate Change (IPCC), Dr RK Pachauri.

He said that Chinese meteorological department has already set up such a mechanism to study the impact like global warming and El Nino (warming of Pacific Ocean off the coast of American Continent) on their weather pattern. He said, India should fol-

low suit as impact of global warming is perceptible in this country. Quality of crops like rice, wheat, tea, coffee, sugarcane, spices and several horticulture produces are adversely affected. Biotechnologists and conventional crop scientists should take up this challenge of developing varieties suited to climate change.

Making a presentation on "Climate Change and Its Implication For Society in India" at CII headquarters on Monday, Dr Pachauri cautioned that global averaged surface temperature is projected to increase by 1.4 to 5.8 degree centigrade over the period 1990-2100. Increases

in winter temperature are likely to be more, particularly in northern latitudes. Globally averaged water vapour, evaporation and precipitation are projected to increase, although regionally the effect could vary. Levels of uncertainty will increase in weather forecast.

He said that hot days have increased while that of cold days and frost have decreased. Continental rainfall precipitation has increased by 5 to 10 per cent in the last 100 years, but it has decreased in certain regions. Frequency and severity of droughts have increased in Asia and Africa. Non-polar glaciers have retreated and snow cover

has decreased by 10 per cent since 1960.

Though the rainfall precipitation has increased in certain areas, the rising high temperature have increased the rate of evaporation leading to water scarcity for crops. The average rate of increase in carbon dioxide concentration in the atmosphere is 0.4 per cent per year since 1980. Most of carbon emissions in the last 20 years is due to fossil fuel burning. Though the carbon dioxide concentration has helped plants and crops to increase their rate of photosynthesis, the increase in temperature has reversed the gains.

Tuesday, July 9, 2002

Brace for climate change, expert tells industry

United News of India
NEW DELHI, July 8

THE Indian industry should acquire greater knowledge about climate change in order to fight its adverse impact, a leading environmental expert said today.

Dr R K Pachauri, Chairman of the inter-Governmental panel on climate change and Director-General of Tata Energy Research Institute, said sectors such as agro-based industries, fisheries, energy and water-intensive industries, financial and insurance services will be directly affected by climate change.

He was addressing a meeting on climate change and its implication for the Indian society, organised by the Confederation of Indian Industry here. According to Dr Pachauri, as agro-based industries such as tea, sugar, spices and wheat are directly dependent on agricultural yields, the impact of climate change on agriculture will either be harmful or beneficial. As tea yield is sensitive to temperature, drought and heavy rainfall, increase in the frequency of droughts and extreme rainfall can result in the decline in tea yield.

Similar is the case with sugar cane whose yield may decrease with increased incidence of drought conditions and reduced summer monsoons, he said. The high con-

centration of greenhouse gas in the environment, rise in the sea level and changes in ocean currents will affect the Indian fishing industry – one of the largest foreign exchange earning sectors of India, Dr Pachauri said.

This is because the rise in the sea level will result in redistribution of fish species, shift in distribution of commercially important species beyond the EEZ, thereby resulting in serious socio-economic problems, he said.

Dr Pachauri said India should utilise its hydro-power potential and develop alterna-

tive modes of power production to meet the growing energy demand of the country. Electricity supply in the coastal areas will be affected by climate change and high-velocity winds will also affect transmission infrastructure of the country, he said.

Dr Pachauri said the cost of insurance in the financial services of the country will go up as most weather extremes have relevance to the financial sector. He said with more heat waves as a result of higher temperature, insurance on health and life would rise.

Moreover, with increase in tropical cyclones and peak wind intensity as a result of climate change, cost of insurance on property, life and health, will increase.

Dr Pachauri said that though India has no commitment under Kyoto Protocol, Indian industries would have to gear themselves up as globalisation has blurred the line between domestic and international influences on business strategy. International influences will not only affect national demand conditions but will also impact the competitive edge of Indian goods in international markets.

With the average rate of increase in carbon dioxide at 0.4 per cent every year since 1980 and with global surface temperature projected to increase by 1.4 to 5.8 degree Celsius over the period from 1990 to 2100, Indian companies will have to be aware of carbon related disruptive technologies. Thus, companies should adopt environment-friendly technologies with lower carbon reductions, which will attribute to their lower costs and less vulnerability, Dr Pachauri said.

There is a growing body of evidence that human activities are responsible for the change in the climate system as the warming over the past hundred years is unlikely to be due to internal variability of the climate system alone.

'Put more money in research'

NEW DELHI: India needs to invest more to research the adverse impact of global warming and measures to counter them as the climate change will not only affect the agro-based industries, but also energy, finance and insurance sectors.

"India, with its varied ecology, should invest more in R&D as its agro-based industries such as tea, sugar, spices, wheat, fisheries, water intensive industries, shipping, energy sector and financial and insurance services will have major adverse impact," said Dr Pachauri.

While very little is known of the effects of warming on industry and most of the information is speculative in India, very few studies have been carried out on the industry-climate linkage, Dr Pachauri said adding, however, that assessment studies in other countries could indicate the plausible nature of impacts.

High temperatures may also bring new diseases, which might affect a greater portion of the population, he said. He exhorted the industry to know the effects of climate change as it sets the intellectual agenda. Dr Pachauri said that efficient clean technology, regional cooperation and interaction with the industry were the need of the hour. – PTI

POLLUTION STILL NOT UNDER CONTROL

URVASHI GULIA

If you thought that your duty as an environmentally sensitive citizen ended with pasting a Pollution Under Control (PUC) certificate on your car, think again. Your vehicle is still emitting gaseous exhausts which affect the environment, but which are not checked when you are granted the PUC certificate.

According to the pollution check norms, the permissible limit for carbon monoxide (CO) is 3 per cent of the total emission for cars and 4.5 per cent for two-wheelers. This is in stark contrast to global standards, where the percentages are kept at 0.5 or lower. Diesel vehicles are tested only for emission opacity (amount of particulate matter present in the exhaust smoke) while CNG vehicles are tested only for CO levels.

"The existing norms are extremely lax as harmful elements — including hydrocarbons, nitrogen oxide and particulate matter — are not taken into account," says chief of Centre of Science and Environment's air pollution unit Anomita Roy Chaudhary.

Apart from CO, petrol vehicles emit substantial amounts of hydrocarbons and nitrogen oxide. CNG vehicles emit nitrogen oxide while particulate matter and nitrogen oxide are key emission contents of diesel vehicles. Another fact which is ignored is that two-wheelers and TSRs running on petrol emit huge amounts of particulate pollutants. Unlike in countries like Taiwan, all this is not tested. The present norms also don't take into account the performance of catalytic converters, which came into existence in 1995.

Since vehicles are tested in an idle state (when they are not running), it leaves scope for tampering as well. Fuel supply to the engine can be easily re-adjusted to get the permitted level of CO emission just before it is taken for the fitness test.

Another bother for environment-

The pollution check norms are set by the Ministry of Road Transport and Highways under the Motor Vehicle Act and Rules.

When the norms were formulated in 1991, we did not have very modern technology in terms of cars and their Mass Emission Standards. Even the catalytic converters came in much later. Newer vehicles need more stringent tests but the current PUC test does not take this into account. The periodicity of the test is also under scrutiny.

Changing the current norms would mean addressing the basic question of financial capacity and available infrastructure. There are a few proposals from the private sector but they are under consideration. The government will have to look into the land and licensing details, apart from the technology.

It is good that the government has introduced stringent norms for Mass Emission Standards, but we need to address the in-use Emission Standards as well.

Dr Ranjan Bose, Sr Fellow, TERI

Date	SO ₂	NO ₂	RSPM	CO
15 Jan	13	90	329	683
15 Feb	7	72	283	NA
15 Mar	7	56	249	NA
15 Apr	7	64	220	NA
15 May	12	92	279	NA
15 June	10	69	231	NA
4 July	8	69	231	NA

All figures in micrograms per meter cube

watchers is that the same standards apply to all vehicles, irrespective of their age. "This is a flawed approach. Newer vehicles should be tested more stringently," says Ms Choudhary. According to a survey by Vatavaran in 1998, over 70 per cent new vehicles failed to clear a pollution check. "This in spite of the low standards adopted," she remarks.

Ms Choudhary suggests the chassis dynamometer test as a better option. The dynamometer is attached to the chassis and it creates a condition similar to when a vehicle is on-road. "This leads to better detection of actual emission levels," she explains.

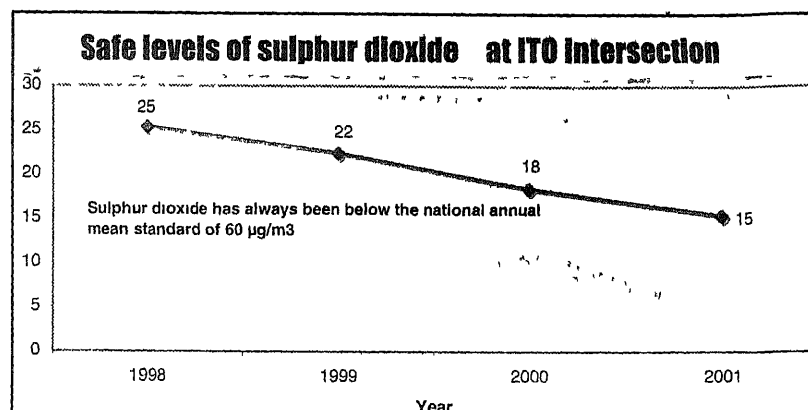
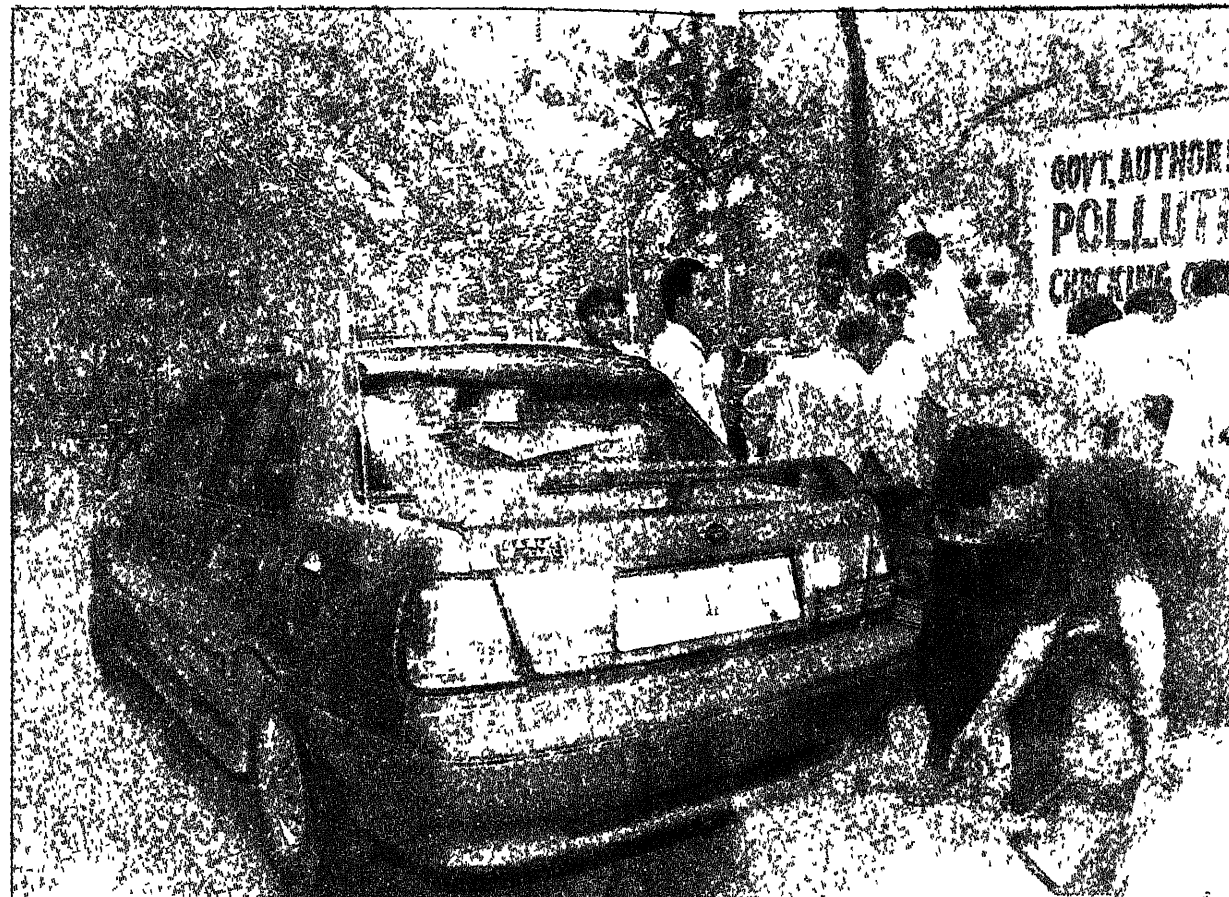
It would also help if the system is upgraded and centralised. Instead of the 400-odd PUC centres, we should have 10 big centres. This will allow better monitoring and calibration of the machines and help reduce the number of instances where the certificate is issued against payment of "consideration" money.

However, not all vehicles pollute. Some are over the margin by a negligible amount and need only minor repairs or engine tuning. The "extremely polluting vehicles" which contribute to nearly 60 per cent of the air pollution are about 20 per cent of the entire vehicular population in the city. Apart from some problems arising due to lack of maintenance, the onus of most of the pollution problems rests with the manufacturers. "Many a time, the fault is inherent in a vehicle. For an effective pollution control system, a wide-ranging stringent policy involving both manufacturer and consumer is needed," says Ms Choudhary.

As of now, the responsibility of a manufacturer is limited to mass emission tests before the vehicles are sold. But once the vehicles come out on the road, their condition gradually deteriorates. The manufacturer finds no mention in the "in-use emission standards" after the vehicles are on-road.

Roadside inspection of visibly polluting vehicles is a viable option. Another system that can be developed is the 'recall' system, wherein an entire batch of vehicles is selected at random and stringently tested.

If any vehicle shows a defect, the manufacturer is asked to look into the snag, suggest possible solutions and withdraw the entire batch of vehicles sold in the same year. The recalled vehicles are set



right and handed back to the rightful owners.

The Central Pollution Control Board (CPCB) recently forwarded some recommendations to Mashelkar Committee for improving the existing PUC norms. The board seeks to bring down the permissible emission levels of carbon monoxide to 0.5 per cent for all vehicles, excluding those with catalytic converters.

For the latter, a ceiling of 3.5 per cent has been recommended. Hydrocarbon

levels being 750 ppm in petrol cars and 9000 ppm for two-wheelers and TSRs. It has also been suggested to reduce the opacity level of diesel emissions from 50 per cent to 30 per cent. Smoke Unit (HSU) to 65 HSU.

"Mass emission norms are more important than in-use emission norms. We have recommended the 'recall' system

and upgradation of the existing check system," says Mr SA Dutta, senior project scientist, CPCB. He admits that vehicle manufacturers are opposed to the recall system. The new norms "will slowly come into existence." Once the recommendations are cleared, the hydrocarbon level-testing instruments and other new devices will have to be inspected by the Automotive Research Association of India (ARAI), Pune, before being put to use. The final report will then need a green signal from the government.

However all this leaves just one question unanswered. If the PUC check is not adequate, then why have it at all? According to Delhi's Transport Minister Ajay Maken, "As per the High Court directions, the test is a statutory requirement. We have requested the Environment Pollution Control Authority (EPCA) to specify more stringent

Gagan Sarang:
We maintain our car very well and get the pollution check done routinely, irrespective of whether a drive is on. But I feel that enough is still not being done. I have heard that the test does not take into account all pollutants. I wonder why all pollutants are not accounted for in the test? But I guess that's the way the system functions. Always slow!



Kiran Marchanda:
I know that my vehicle is tested for carbon monoxide exhaust. I also know that a lot of pollutants are still not checked when they award the PUC certificate. But all said and done, even the existing basic test has helped bring down pollution levels in the city. As for our car, we get it serviced regularly and also get the pollution check done on a regular basis.



annual affair."

On the inadequacy of the current norms, he says, "Only when we have the new norms from the EPCA can we go ahead with a plan of action. This will take time. At the moment, the drive is to make



Breakthrough unlikely at green meet: India

DH News Service
NEW DELHI, July 8

Barely a month before the crucial Johannesburg summit which is expected to review the advancement since the historic Rio Earth Summit in 1992, chairman of Inter-governmental Panel on Climate Change (IPCC) Dr R K Pachauri today ruled out any breakthrough from the meeting

The World Summit on Sustainable Development (WSSD), to begin in the last week of August, is expected to find out progress made in various fields since the Rio summit. Furthermore, it will discuss how successful the countries are in implementing Kyoto Protocol and how to overcome the shortcomings, if there is any. In fact, some of the advanced nations including the US had refused to implement Kyoto on the ground that it would affect their economy directly.

However, talking to Deccan Herald on the sidelines of a CII meeting on environment, Dr Pachauri said that he is not hopeful about the outcome of the summit. "The meeting will focus on issues such as poverty and education which are not related to environment directly. I don't think it will yield much," he said.

The first Indian chairman of the global environment body also promised more interactions between IPCC and the Indian industry to prepare the industry with the disastrous consequences of global warming and other deleterious effects of climate change.

Highlighting the effects of climate change on industry, Dr Pachauri said with increased concentration of greenhouse gas in the atmosphere and increase in temperature, the effect will be most telling on agro-based industry, shipping, fisheries, energy and water-intensive sectors.

Though he pointed out that global warming would also lead to 10 to 15 per cent increase in rainfall, the final result would not be beneficial as the precipitation would be spread over a short time and lead to flash floods. CII too has asked for more assistance of Tata Energy Research Institute (TERI), headed by Dr Pachauri and IPCC to sort issues such as use of persistent organic pollutants (POP) in the industry.

Earth, wind and fire

Neha Chopra

If Jack the Ripper slashed and mutilated his victims, we are slashing and destroying our forests. If Jeffrey Dahmer poured acid into his victim's brain, we are pouring toxic wastes into our rivers and oceans. We are, in fact, more savage than those serial killers. They killed people they did not know. But we are killing the world of nature into which we were born.

Our lives depend on environmental conservation. Yet man, obsessed with greed, is turning the sky, the earth and the oceans, into his enemy. Overflowing drains, putrid squalor, skies choked with black smoke, deserts which were once a sea of green—these make up our universe. Where are we heading? Rapid industrialisation and over-utilisation of resources are destroying nature. Not only nature, but also our historical monuments, our tourist sites, our physical and mental well-being. Is it not ironic that the Taj Mahal, a monument that has long held the world in awe, should now be under heavy security guard? On second thoughts, the enemy does not need to destroy what is already on its way to degradation, courtesy the refineries and industries located nearby. The Taj has yellowed, due to the air's sulphur content, to such an extent that if you ask a five-year-old what its colour is, he would think of everything—cream, yellow, off-white—but white!

The World Health Organisation ranks Delhi fourth in the list of cities with poor air quality. On an average, 7,500 Delhites die every year due to diseases traced back to inhalation of noxious vehicular emissions and factory fumes. The Yamuna has been declared a health hazard. Over 18 drains with toxic wastes empty into it. One can judge the contamination levels from the fact that even elephants bathing in it have had to be rushed to veterinary hospitals.

Environmental conservation is not only a matter of sentiment, as so-called pragmatists seem to think. It is an economic imperative, particularly in a country where the majority of the population depends for its livelihood on natural resources and the environment. India loses over 10 per cent of its GDP annually due to environmental degradation, according to a major study carried out by the Tata Energy Research Institute (TERI) called GRIFFIN India 2047. Between '11 to '26 per cent of the country's agricultural output is being lost on account of soil degradation.

Surely the pursuit of industrial growth and economic prosperity cannot be at the cost of the very thing that sustains life. The TERI reports that increased pollution levels are resulting in decreased IQ levels in children. They are also responsible for the widespread incidence of diseases like asthma, bronchitis and lung cancer. Every citizen should realise that by polluting the earth, we are polluting our own bodies and putting our children at risk.

Each one of us can contribute towards the betterment of our environment. Let us start with simple things like remembering to switch off the lights and turn off the watertaps. Let us use car pools and public transport. Let each one of us plant one tree and help it grow. Giving a chance to the environment means giving a chance to the human race. If we continue to slumber, we may wake up in a world long relegated to science fiction, turning into creatures who talk nostalgically about a planet that used to be green. The choice is ours. Either we clean up the earth, or we bequeath a wasteland to future generations.

70 pc of Delhi dependent on 'dead' Yamuna

HT Correspondent
New Delhi, June 24

CLOSE TO 70 per cent of Delhi's population depend on the Yamuna — a river that has officially been declared 'dead'

And, that's only the flotsam on the surface. Studies show that the 22-kilometre stretch of the holy river that passes through the Capital spews in as much as 79 per cent of the total garbage and waste that pollutes the Yamuna.

That too after both Central and state governments have spent thousands of crores, over the past decade, trying to make its waters at least fit for bathing, if not fit

for human consumption.

Under the aegis of the Tata Energy Research Institute, all important stakeholders associated with the protection of the second most holy river of India — the Ministry of Environment and Forests, Delhi Government and Central Pollution Control Board and several non-governmental organisations — met on Monday morning to discuss how best to save the river from further harm.

Delhi Chief Minister Sheila Dikshit set the ball rolling. "Though the clean Yamuna campaign has been on for last two decades, I admit very little has been done," she said.

"There is far too much criss-crossing of authorities, with absolutely no co-ordination whatsoever."

The CM highlighted three problem areas. First, finding an alternate spot for the 75,000-odd people living in slum clusters on the Yamuna banks.

Second, new proposals like toilets built for these slum dwellers to prevent defecation on the banks, with several crores in foreign aid, are ill-planned.

"In quite a few of the 1000 toilets the MOEF built there is no water supply. Moreover, they are very far from where the slum dwellers live, so few use them," she pointed out.

Environment Secretary PV Jayakrishnan said "The water of the Yamuna near the Sangam is very clean. That's because the river Chambal flows into it near Etawah, diluting the pollutants in it. So our clean Yamuna efforts have to concentrate mainly on the 22 kilometre stretch that passes through the national capital territory."

Dr Pachauri, TERI chief, said "We in India have to remove the mental block with regard to pricing of water. We regard it as a gift of god and think it should not come at a price. But we must understand that like every other resource, water too, is getting scarce by the day."

11/9/09

IN BRIEF

Rs 2,000 crore Japanese aid for cleaning Yamuna on the cards

NEW DELHI The government will soon get Rs 1,500-2,000 crore assistance from Japan for the second phase of the Yamuna Action Plan aimed at cleaning the 22 km stretch of the river along the Capital. "We are in the final stages of negotiation with the Japan Bank of International Co-operation for assistance for the second phase of the Yamuna Action Plan," Union minister of environment and forests T R Baalu said at a workshop organised by the Tata Energy Research Institute here on Monday. The second phase of the Yamuna Action Plan proposes to divert the 19 main drains and 38 tributary drains discharging wastewater in the river, set up additional sewage treatment capacity with decentralised approach and disinfect treated sewage. Lamenting the loss of manpower and resources due to overlapping of authorities, Delhi chief minister Sheila Dikshit demanded constitution of a committee of stakeholders. "There is a crisscrossing of central and state government authorities, resulting in the failure of implementation of the programmes," Dikshit said. A coordinated effort between the central and state agencies was required for better implementation of policies and success in cleaning the river, she added (PTI)

“Delhi reduces Yamuna to a sewage drain”

By Our Staff Reporter

NEW DELHI, JUNE 24 The main source of water for the Capital, the Yamuna, according to the Central Pollution Control Board, falls under the category 'E' which makes it fit only for recreation and industrial cooling, completely ruling out the possibility for underwater life, let alone serve as drinking water.

These points and more were highlighted during a day-long workshop on “Towards a Cleaner Yamuna” organised by Tata Energy and Research Institute (TERI) here in the Capital today. Delivering the inaugural address, the Union Minister of Environment and Forests, T R Baalu, spoke about the need to restore the water quality of the river and the on-going negotiations with the Japan Bank of International Cooperation for the second phase of the Yamuna Action Plan.

Attended by representatives from the Central Government, the Delhi Government, the Delhi Jal Board and the Municipal Corporation of Delhi and various

non-governmental organisations, the main point of discussion were recommendations for the second phase of the Yamuna Action Plan.

“During the first phase only 4 per cent of the total Plan outlay was spent in Delhi. This is a way to make sure that Delhi gets more in the next phase,” said TERI official, Kapil K. Narula.

The workshop included screening of a 10-minute documentary on pollution in the Yamuna. Put together by TERI, the documentary pointed out the various sources of pollution into the river and the adverse affects of the pollutants. Three out of every ten children die from water-related diseases and this can be traced to the presence of heavy metals in the river water which results in neurological disorders and the wastes from domestic sewers which leads to bacterial infection.

Pointing out that the surface water quality of the river was ‘pristine’ in the upper reaches, Mr Narula delivering a presentation on “Water quality and issues in the Yamuna” said that this quality dipped in

the middle stretch, especially in Delhi, where it was “highly polluted”.

Speaking on the same issue, senior scientist, Central Pollution Control Board, R C Tiwedi, informed that according to a city-wise breakdown of pollution load in the Yamuna, Delhi was the main contributor -- a whopping 79 per cent.

It is followed by Agra and Mathura, which account for 9 and 4 per cent of pollution load respectively.

“The river maintains reasonably good quality from its origin to Wazirabad in Delhi. The discharge of waste water through 15 drains between Wazirabad barrage and Okhla barrage renders the river to almost a sewage drain,” said Mr Tiwedi.

In a presentation on “Recommendations on improving water quality of river Yamuna and the minimum flows required in Delhi stretch”, S P Singha, chairman of Pani Morcha, argued for the construction of barrages, on-channel eco-parks, harvesting water in flood plains, reservoirs over the option of increasing the height of the TERI dam.

Aid for Yamuna Action Plan

NEW DELHI In an effort to clean the Yamuna river, the Centre is negotiating with the Japan Bank of International Cooperation for assistance in the implementation of the second phase of Yamuna Action Plan, the Minister of Environment and Forests, Mr T R Baalu, said on Monday

Speaking at a workshop on 'Towards a cleaner Yamuna', organised by Tata Energy Research Institute (TERI) here, Mr Baalu said negotiations with the Japanese bank were at an advanced stage and a broad agreement would be arrived at in a month's time — Agencies

DELHI

Recycle waste for irrigation

108 11922
TIMES NEWS NETWORK

New Delhi Several technical and non-technical recommendations were made to clean the Yamuna at a one-day workshop organised by the Tata Energy Research Institute. One of the suggestions was to recycle sewage and use it for irrigation.

According to experts who participated in the workshop, the main problem was lack of fresh water and excess of sewage in the Yamuna. It was held that the sewage, even if treated, should not be allowed to flow into the river.

According to a presentation by a non-government organisation Paani Manch, sewage should be released into the Yamuna only after tertiary treatment.

In tertiary treatment, flock formation of organic matter takes place which settles down in the tank. If tertiary treatment is not successful the biological oxygen demand (BOD) of water will not come down to three milligrams (mg) per litre but remain at 10 mg per litre.

The 12 sewage treatment plants functioning at present carry out primary treatment

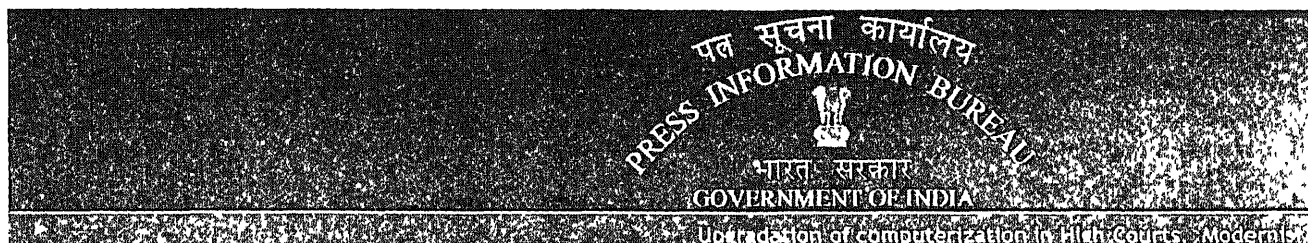
only. Another suggestion made by Paani Manch and supported by the representative of the Central Ground Water Board was setting-up of eco-parks along the riverbank. A K Bhowmick said it was important to artificially recharge the ground water to clean Yamuna.

Making the keynote address, Delhi state chief minister Sheila Dikshit said it was important to have a committee, comprising all the stakeholders, to monitor the Yamuna Action Plan (YAP).

Union environment minister T R Baalu said India would soon get Rs 1,500 to 2,000 crore in aid from Japan to initiate the second phase of YAP.

"We are in the final stages of negotiation with the Japan Bank of International Cooperation," he said.

In the second phase, 19 main drains and 38 tributary drains discharging waste water in the river will be diverted. R K Pachauri, director general of TERI, said "There is probably no river of greater purity which has been damaged to a greater extent than the Yamuna by a small section of society".



Press Releases

24th, June, 2002

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SHRI BAALU'S ADDRESS AT THE WORKSHOP ON

"TOWARDS A CLEANER YAMUNA"

The Environment and Forests Minister, Shri T R Baalu has said that negotiations are on with the Japan Bank of International Cooperation for the second phase of the Yamuna Action Plan (YAP). Addressing a workshop on "Towards a Cleaner Yamuna" here today, Shri Baalu said that these negotiations are in an advanced stage. Asserting that Delhi will have a major share in the second phase of the plan, Shri Baalu hoped that his Ministry will be in a position in the near future to offer an integrated package to Delhi, at a cost sharing ratio of 70 30 between the Central Government and the Delhi Government. He requested the Chief Minister of Delhi, Smt. Sheila Dikshit to convey her Government's consent to bear the 30 per cent cost of the proposed Yamuna Action Plan Phase II, a matter which is pending for sometime.

Briefly outlining the proposed approach to be adopted for implementing the second phase of YAP in Delhi, he said that we will have to ensure that all the 19 drains which are discharging partly treated and partly untreated waste water into the river are diverted. In the same way, the 38 tributary drains of Najafgarh drain, which are responsible for about 65 per cent of the pollution of Yamuna will have to be tapped and diverted. Additional sewage treatment capacity is to be put in place with the decentralized approach. The emphasis will be on locating the new STPs as close to the river mouth as possible so that the use of conveying pipes is minimized. The dilapidated trunk sewerage system should be rehabilitated and restored as early as possible so that the entire captured waste water is fully treated.

Shri Baalu said that the second phase will also focus on disinfection of treated sewage to ensure that not only the organic pollution but also the bacteria caused pollution is tackled fully. With these arrangements in place and with the commissioning of all the 15 common effluent treatment plants in the 21 industrial estates that are presently under construction, the treated wastewater that will be discharged into the river will be of safe quality. But, the Minister said, a more important aspect is that we must have a minimum fresh water flow into the river always. With an additional perennial fresh water flow of 10 cumecs into the river, it will be possible to restore the water quality of Yamuna back to normal.

Shri Baalu recalled that the Government launched the ambitious Yamuna Action Plan in 1993 in Haryana, Uttar Pradesh and Delhi to clean the Yamuna river. In the first phase of this Plan which has been completed, we have spent Rs 480 crore. The share of Delhi in this Plan was only 4 per cent. This was mainly for the reason that the Government of Delhi had been implementing various works out of its own plan funds.

The Minister added that in view of the priority required to be given to clean Yamuna his Ministry took up the extended phase of the Yamuna Action Plan. A Rs 166 crore project was approved for Delhi in May, 2001. Under this project, a

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Corporate Environmental Awards

**Instituted in recognition of corporate leadership efforts
towards environmental management and sustainable initiatives**

There is growing realization in the corporate sector that clean environmental and sustainable development initiatives are a prerequisite to the long-term sustainability of business. As a result, corporates in recent times have taken concrete strides to integrate sustainability into their corporate strategy with gainful rewards. TERI, credited with numerous initiatives to bring about this awakening, instituted the Corporate Environmental Awards in 2000/01. Encouraged by the overwhelming response and sincere interest shown by the Indian corporate houses, TERI will now confer the Corporate Awards annually. The Awards for 2001/02 will focus on the expanding role of corporates, encompassing environmental responsibilities towards sustainable industrial development in India. The winners of these awards will be felicitated at DSDS 2003.

Objectives

- To recognize the leadership efforts of corporates in environmental management and sustainable initiatives
- To recognize innovative practices, programmes, and projects that promote sustainable development
- To further encourage and provide momentum to environmental initiatives

Categories

- Companies with a turnover less than or equal to Rs 100 crore per annum
- Companies with a turnover between Rs 100-500 crore per annum
- Companies with a turnover above or equal to Rs 500 crore per annum

Eligibility criteria

All Indian registered companies are eligible to apply. Case studies focusing on environmental initiatives, programmes, projects undertaken by the corporates with real-life applications will be considered for the above awards. The case studies should relate to a specific facility. Corporates may submit more than one entry.

To Apply

Forms may be downloaded from TERI's web site at www.teriin.org or obtained from TERI, New Delhi. The completed application form along with relevant documents and the application fee should reach TERI, New Delhi, no later than 15 September 2002.

Seminars

Two half-day seminars will be held on 5 February 2003 as part of DSDS 2003. The seminars would focus on corporate initiatives on the environment and social responsibilities. International speakers will be on the panel.

For any further details, please contact

Mr R K Narang

Distinguished Fellow

Tata Energy Research Institute

Darbari Seth Block, Habitat Place

Lodhi Road, New Delhi - 110 003

Tel: 468 2100/2111

Fax: 468 2144/45

Web: www.teriin.org

DSDS 2003

The Third Delhi Sustainable Development Summit

The Message from WSSD

Translating resolve into action for a sustainable future

6-9 February 2003, New Delhi

Now in its third consecutive year, the DSDS is poised to become an annual international event of great significance and perhaps the only global forum focusing on global sustainability issues in the developing world. As in the past, heads of governments, captains of business and industry and non-governmental organizations, pioneering researchers and scientists, leading media representatives, and senior executives from bilaterals, multilaterals, and the diplomatic corps from world over will attend the summit.

TERI

Corporate Environmental Awards

Request form for application

Please mail the application form to

Name

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Organization

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Tel

Fax

Date

Print media host : THE FINANCIAL EXPRESS

what people in the cities have on their tables

27 JUL 2002

Global warming is behind rain failure: UN climate panel head

PALLAVA BAGLA
NEW DELHI, JULY 26

THE current Indian drought may be directly linked to the larger climate change that is affecting the globe, feels R K Pachauri, chief of the UN-sponsored Inter-governmental Panel on Climate Change (IPCC), Geneva. It's a position directly at odds with that taken by the Indian Meteorological Department, which says there's no question of climate change.

Pachauri, who's also director-general of the Tata Energy Research Institute (TERI), New Delhi, says "it's been a very peculiar summer this year and some perceptible climate change is taking place in India". "There is a very strong reason to connect the current drought to larger climate change since what we are witnessing is a peculiar and sudden variation in climate as predicted by experts studying global warming", he says.

The third assessment report put out by the IPCC in 2001 talked in great de-



R K Pachauri

tail about the impacts of climate change on South Asia. In fact, it predicted the emergence of drought and floods on this region, stating "there are possibilities of unforeseen

The current erratic behaviour of the monsoon is probably the first strong signal of climate change having had a direct impact on India, says Pachauri

surprises in the future"

The way this year's monsoon has behaved — starting off normally, then suddenly petering out — has no doubt surprised many climatologists. The IPCC is a scientific expert body having 192 countries as its members and is mandated by the UN to assess the scientific, social, and economic issues related to hu-

man-induced climate change.

Pachauri feels once the delicate balance in the global circulation patterns is disturbed due to man-made circumstances, "non-linear and sudden changes are bound to be the outcome" and emphasises that this current erratic behaviour of the monsoon is probably the first strong signal of climate change having had a direct impact on India.

The IPCC report had also predicted a rapid glacial melt not just of the polar ice caps but also of the Himalayan regions.

Evidence to that effect is found in the Bhakra reservoir, which is essentially fed by glacial melt and is more than full while other rain-fed reservoirs are less than half full today. This, too, hints at changing climate, Pachauri says.

Interestingly, the India Meteorological Department has never acknowledged that global warming and climate change are taking place and could seriously affect the pattern of precipitation for India.

BUSINESS STANDARD

CALCUTTA

12 JUL 1992

Tata Energy Research, CES to work on \$400m Kolkata civic project

Our Regional Bureau
KOLKATA, 25 JULY

Kolkata Municipal Corporation (KMC) has selected Consulting Engineering Services & Associates (CES) and Tata Energy Research Institute (TERI) as partners in the implementation of the \$400 million Kolkata Environmental Improvement Project (KEIP) funded by the Asian Development Bank (ADB). The two contracts combined were worth more than Rs 37 crore.

The long-awaited KEIP seeks to improve the condition of the sewage and water supply systems of the city along with upgradation of slum areas and comprehensive revamp of the

city's defunct canal system.

KEIP was expected to lead to substantial improvement in the quality of living conditions in the underprivileged sections of the city as well as greatly ease water supply and sewage problems. The revival of the city's system of canals, for use as water channels and transport corridors, would be an added bonus.

Under the CES contract, worth Rs 34.27 crore, the consultant would be required to support KMC in project preparation, contract planning, detailed drawings and assist in formulation of project procurement packages, said highly-placed KMC sources. In addition, once

be required to monitor progress of work, prepare status reports on progress and ensure that work and quality specifications were being complied with.

TERI has been selected as the non-government organisation (NGO) as the ADB stipulated that KMC would have to induct one NGO to handle the social and human aspects of the project and assess its human impact.

Under its Rs 3.37 crore contract, TERI would have to hold meetings with stakeholders and communities, monitor the benefits delivered by the project, facilitate poverty alleviation measures and above all, monitor the politically sensitive issue of resettlement of popula-

Global warming is behind rain failure: UN climate panel head

PALLAVA BAGLA

NEW DELHI, JULY 25



THE current Indian drought may be directly linked to the larger climate change that is affecting the globe, feels R K Pachauri, chief of the UN-sponsored Intergovernmental Panel on Climate Change (IPCC), Geneva. It's a position di-

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CONTINUED ON PAGE 2

Global warming is behind rain failure

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Evidence to that affect is found in the Bhakra reservoir, which is essentially fed by glacial melt and is more than full while other rain-fed reservoirs are less than half full today. This, too, hints at changing climate, Pachauri says.

Interestingly, the India Meteorological Department (IMD) has never acknowledged that global warming and climate change are taking place and could seriously affect the pattern of precipitation for India. In fact, the IMD goes to great lengths to condemn any notions of climate change despite the growing body of evidence from across the globe.

S R Kalsi, IMD deputy director-general, feels it is "incorrect to say that there is a change in climate", adding that this is merely a part of the "natural behavior of the monsoon" borne out by the over 125 years of data with the IMD.

Pachauri reacts to this by saying the IMD is 'entitled to have their opinions but the indications of climate change are very strong since the curves from the world over suggest a gradually warming Earth'.

The TERI chief who took over as chairman of the IPCC this April, says India needs to step up its primary research on climate change to fully understand the implications of changing climate and to build suitable mitigation measures. He calls for at least a 20-fold increase in the spending on climate related research since the impact of global warming will be felt by all sectors of the Indian economy.

DAINIK JAGRAN

KANPUR

16 JUL 2002

लीकेज से 52 प्रतिशत जलापूर्ति प्रभावित

टाटा एनर्जी रिसर्च इंस्टीट्यूट की रिपोर्ट सुविधाएं बेहतर हों तो 53 प्रतिशत लोग ज्यादा कर देने को तैयार

स्टाफ रिपोर्टर, कानपुर

सोमवार

टाटा एनर्जी रिसर्च इंस्टीट्यूट (टेरी) के सर्वेक्षण में जलापूर्ति बाधित होने के कारणों में 52 प्रतिशत पाइप लाइनों में लीकेज बताया गया है।

टेरी ने कानपुर और दिल्ली में जल सफाई के कारणों पर निकायों के जनप्रतिनिधियों, जनता के बीच जाकर कारणों का पता लगाया है। सर्वेक्षण सलाहकार अभियंता टी डी दर्याना से टेरी की देख-रेख में कराया गया। सर्वे रिपोर्ट में सस्थान के भरोसे पानी लेने वाले घनी आबादी के इलाकों में लाइनें चोक होने से 38 प्रतिशत, लीकेज 55 प्रतिशत, बिजली आपूर्ति बाधित होने से 60 प्रतिशत तथा 10 प्रतिशत अन्य कारणों से पानी की सप्लाई नहीं हो पा रही है।

औसतन साढ़े तीन घण्टे जलापूर्ति होती है। सस्थान द्वारा अपर्याप्त जलापूर्ति वाले क्षेत्रों में औसतन डेढ़ घण्टे तक पानी आता है। यहां

पाइप लाइन चोक होने से 23 प्रतिशत, लीकेज से 55 प्रतिशत, बिजली फेल होने से 60 प्रतिशत तथा 23 प्रतिशत अन्य कारणों से इन इलाकों में पानी की सप्लाई बाधित रहती है। सर्वे रिपोर्ट में प्रथम श्रेणी में सस्थान से पानी लेने वाले चुन्नीगंज, तलाक मोहाल, बेकन

दूसरी श्रेणी में उन इलाकों को रखा गया है जहां सस्थान की अपर्याप्त सप्लाई है। इन इलाकों में नोबस्ता, जयौली, पशुपति नगर, सुजात गंज, कृष्णनगर, तिवारी पुर, जाजमऊ, हरजिंदर नगर, ओमपुरवा, उम्मानपुर, गोविंदनगर, विकास नगर, रावतपुर आदि क्षेत्र

रिपोर्ट के अनुसार तीनों श्रेणी में प्रथम श्रेणी वाले इलाकों में रहने वाले लोगों में 29.64 प्रतिशत तथा दूसरी श्रेणी के क्षेत्रों में रहने वालों में 21.75 लोगों ने कहा कि पर्याप्त मात्रा में पानी मिल रहा है। उत्तम गुणवत्ता वाला पानी इन इलाकों में क्रमशः 23.64 प्रतिशत तथा 20 प्रतिशत और इन्हीं क्षेत्रों में शिकायतों पर सस्थान द्वारा रसिदास दिए जाने से 30.91 प्रतिशत लोगों ने सन्तुष्टि जतायी है। दूसरी श्रेणी के क्षेत्रों में यह प्रतिशत 21.75, 20, 8.75 है। टेरी की रिपोर्ट में चौकाने वाला तथ्य तो यह है कि 53 प्रतिशत लोग कहते हैं कि सुविधाएं सस्थान बेहतर कर दे तो वे ज्यादा कर देने के पक्ष में हैं लेकिन 42 प्रतिशत लोग कहते हैं कि जल कर की दर काफी अधिक है। पर 27.14 प्रतिशत लोग इसे ठीक मान रहे हैं। आश्चर्यजनक तो यह कि 1.43 प्रतिशत लोग ऐसे भी हैं जो कहते हैं कि जल सस्थान द्वारा निर्धारित जल, मौवर कर की दरें बहुत कम हैं इन्हें अधिक होना चाहिए।

दूषित पानी वाले कनेक्शन काटे जाएंगे

कानपुर, सोमवार - स्टफ रिपोर्टर। जल सस्थान के महाप्रबंधक डी एस गड्डीविया ने बताया कि दूषित पानी देने वाले पानी के कनेक्शन तत्काल प्रभाव से काटे जाएंगे। इसके लिए जोनल इंजीनियरों से रिपोर्ट मांगी गयी है कि उनके परिक्षेत्र में कितने ऐसे कनेक्शन कहा-कहा है। श्री गड्डीविया ने बताया कि शिकायतों के आधार पर एक सूची अलग से तैयार की गयी है। जल सस्थान की कोशिश है कि किसी भी कीमत पर जनता तक दूषित पेयजल न पहुंचने पाये।

गज, परेड, दानाखोरी, भूसाटोली, बेकन गज, बाबू पुरवा, दलेलपुरवा, चमनगंज, वाकर गज, ट्रासपोर्ट नगर, ग्वालटोली, कोपरगंज, ग्वालटोली, नेहरूनगर, सर्वोदय नगर, नवीन नगर आदि घनी आबादी वाले इलाके हैं।

हैं। तीसरी श्रेणी में उन इलाकों को रखा गया है जहां सस्थान की पानी सप्लाई की लाइनें ही नहीं हैं। इनमें सनिगवा, चंदारी, यशोदानगर, चकेरी, ख्योरा, नारामऊ, सरायमीता, विनायकपुर आदि इलाके हैं। टेरी की सर्वे

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TOI
29/7

Weather Bane

Worldwide, climate patterns are being subject to wild swings. While some areas are faced with floods, others fear drought, the US not excluded. Closer home, unusually, even normally rain-rich Kerala is worrying about the poor monsoon this year, even as floods create havoc in Assam and its surrounding areas. The world is blowing hot and cold. Blame it on global warming, says the US National Academy of Sciences which warns that sudden, unexpected climate change triggered by a complex set of factors — mostly human-induced — poses an immediate danger. The IPCC (UN Inter-governmental Panel on Climate Change) chief supports this theory, attributing India's errant monsoon and drought to larger climate changes. Are we prepared for climate-induced disasters? What is our global collective responsibility? The forthcoming Rio Plus Ten summit, besides discussing these issues, should also turn the spotlight on alternative scientific solutions. For instance, scientists report breeding GHG-munching microbes — that also feed on nuclear waste and toxicity in the soil. The extremophiles can survive in extreme weather conditions and hence could play a crucial role in cleaning up the environment. Clean technology is the key word.

The rise in sea levels is now no longer a joke. Igloos may soon become history since ice and permafrost are melting at an alarming rate in Alaska. With its glaciers thinning twice as fast over the past five years compared to the preceding four decades, frozen Alaskan rivers are losing up to two metres of ice every year. Some glaciers have gained ice, but not enough to compensate for the losses suffered by thinning glaciers. The Columbia Glacier which travels to the Gulf of Alaska, is losing so much of itself — it is 150 metres lower than it was five years ago — that it is expected to collapse any day. Alaskan glaciers are not alone, they share their fate with the icy rivers flowing as far apart from one another as Patagonia and the Indian subcontinent. The health of our own Himalayan glaciers is failing. Water levels in glacial lakes in this region have been rising steadily. In fact, the UN Environment Programme has predicted large-scale loss of property and life if adequate measures are not taken soon to keep the melting glaciers in check. Floods and droughts and a 6 per cent economic growth target can be compatible only if checks and balances are already in place. Are they?

DANIR HINDUSTAN
NEW DELHI

18 JUN 2002

क्योटो जलवायु संधि पर अमल से विकसित देशों पर बुरा असर नहीं

विशेष संवाददाता

विलियम नॉरट्राउस जैसे अर्थविज्ञानियों
अध्ययनों पर आधारित है जिसे नये अनुसंधान
न झुठला दिया है।

नई दिल्ली, 17 जून। नवीनतम अनुसंधानों से उजागर हुआ है कि क्योटो जलवायु संधि के अमल से विकसित देशों की आर्थिक प्रगति पर बुरा असर नहीं पड़ेगा। 'टाटा इनर्जी रिसर्च इंस्टीट्यूट' (टेरी) के वैज्ञानिकों का कहना है कि इस बारे में कुछ विकसित देशों, विशेषकर अमेरिका, कनाडा, आस्ट्रेलिया में भ्रमक धारणाएँ फैली हुई हैं। उन्होंने इस सिलसिले में 'इकोलॉजिकल इकॉनॉमिक्स' में प्रकाशित होने जा रहे एक अध्ययन के हवाले से बताया कि क्योटो जलवायु संधि पर अमल किया जाए या नहीं, दोनों ही स्थितियों में विकसित देशों की अर्थव्यवस्था पर कोई खास फर्क नहीं पड़ेगा।

'टेरी' का आकलन है कि अक्टूबर में नई दिल्ली में होने वाले क्योटो संधि सम्मेलन के नतीजों पर अभी आशंका के बादल छाये हैं। इसकी वजह हाल ही में आस्ट्रेलिया के प्रधानमंत्री जॉन हावर्ड का यह बयान आ जाना भी है कि वह क्योटो जलवायु संधि पर हस्ताक्षर नहीं करेगा। उन्होंने कहा है कि ऐसा करने से बेरोजगारी फैलेगी और हमारे उद्योग तबाह हो जाएंगे। अमेरिका का बुश प्रशासन और कनाडा यह रुख पहले से ही अपनाते आ रहे हैं। अमेरिका, कनाडा और आस्ट्रेलिया का यह रुख

You got the float, now take the cost

The Indian consumer will have to reconcile himself to frequent adjustments in the price of petrol and diesel. The only consolation is that oil companies will no longer be indifferent to him, says **Rahul Deep Singh**

DIESEL & petrol prices to go up! Catchy headlines. Sure to register in the already weary eyes of the common man on the street. The mind struggles to find answers to the inevitable flurry of related questions that pop up with lightening speed—how much will the local sabziwala hike his wares by? Would the bus/auto fares go up? Will another hike follow? Let's ditch that plan to buy the new scooter altogether.

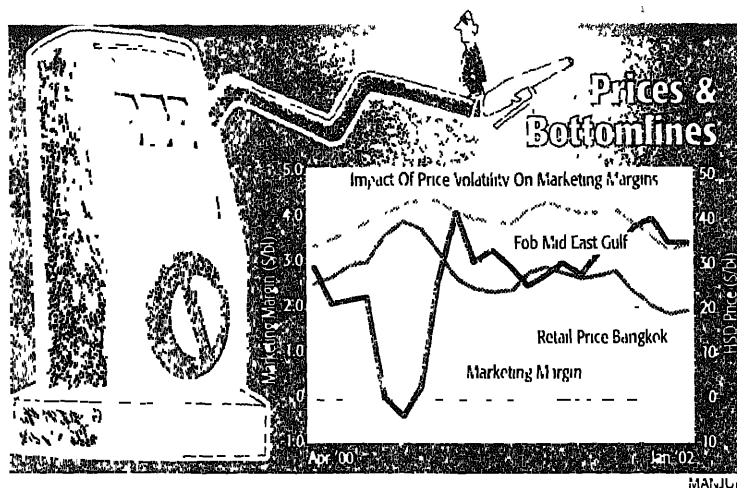
Welcome to the free market! The Indian oil industry has been deregulated, the oil prices decontrolled (supposedly). The government pats it back for pushing through the reform agenda set out in 1997. The critics cry foul—deregulation with government dictating price lines? The poor common man wonders what's in store for him next.

Let's look at the facts for starters. First, with 80% import dependence, we cannot afford to divorce domestic retail prices from international oil prices. Buying crude at high prices and selling products processed from that very crude at artificially low retail prices is just not sustainable. Prices have to reflect costs. Second, price volatility in international oil markets is today a norm, rather than the exception. There are just too many factors influencing oil prices—Organisation of Petroleum Exporting Countries (Opec) decisions, conflicts in the Middle East, US crude stock levels, the harshness of the European winters, and so on and so forth.

The erstwhile administered pricing mechanism (APM) protected the Indian consumer from the ups and downs in the global markets through the oil pool. The pool absorbed the volatility and kept retail prices stagnant. In April 2002, however, the APM for the oil industry was dismantled. The oil

government held price lines for some time, the common man would have already been fully exposed to the vagaries of the global oil markets. Lastly, it must be borne in mind that the said directive, at best, temporary.

Distilling the facts, it follows, that even-



tually domestic retail prices will start reflecting international oil prices. So how does that system work? The best way to analyse it is to consider it in two distinct segments—refining and marketing, even while considering prices offered by one single company. The refining division would procure crude from international markets, process it, and transfer products to the marketing division at the refinery gate. Margins in the refining industry are embedded in the inherent crude and product price differentials in international oil markets. The transfer price for products at the refinery gate thus reflects international product prices, what is typically referred to as the import parity price of that product. Deregulation to this effect, i.e., affecting refinery purchases and receivables at import parity prices, actually took place way back in April 1998 itself.

This refinery gate price, essentially, becomes the base price for the final consumer. Added to this are distribution costs, excise duties, sales tax and other local levies, and finally the marketing margin. The only variable element in this entire list of mark ups is the marketing margin, and hence, it becomes one of the most crucial elements in price fixation in a deregulated environment. Under the

APM, the marketing margins were decided by the net worth of the companies, and reimbursed through the oil pool. An important point to note is that the margin was fixed and was not adjusted from a month-to-month basis as done for the refinery gate product prices. (Actually there are daily variations in prices in international oil markets, but in India these were averaged out over a month for simplification and administrative ease). For instance, just prior to deregulation the marketing margin on diesel was fixed at Rs 195 per kilolitre.

It is this system which changes with the now announced full deregulation of the industry. In a deregulated environment, market prices would be driven by competition. In mature markets in the West for instance, pump prices of one company differ from that of another. Oil companies vie for market share through aggressive stands on marketing margins. In addition, there are weekly/fortnightly price revisions. In times of high oil prices, oil companies moderate the impact of high international prices by taking a squeeze on their margins. As expected, they follow the reverse in times of low prices, by padding up the marketing margins. An analysis of fully deregulated Thai petrole-

um industry, for instance, shows that when diesel prices shot up to over \$37 per barrel in September 2000, the oil companies actually operated at negative marketing margins, - \$0.31 per barrel (-Rs 93 per kilolitre). As soon as the oil markets crashed (December 2000), the marketing margin was shored up to a peak of \$4.82 per barrel (Rs 1,455 per kilolitre) to recoup losses. The consumers went through a roller coaster ride with price variations in excess of 30%, from a low of \$32.83 per barrel (Rs 990/litre) to a peak \$43.10 per barrel (Rs 1310/litre).

The long and short of it—the Indian consumer should reconcile himself to frequent price adjustments (either way, upwards and downwards). As international oil markets become tight, global prices would rise, and so would domestic retail prices. The common man may be on the short-end of it on account of market sentiments alone. Ask an auto driver in Bihangarh in UP today if he is really bothered by the tension between Israel and Palestine, the answer most likely would be a resounding no. Tell him that the same conflict shakes market sentiments in the global oil industry, pushing up oil prices, which would inevitably cause a hike in petrol prices in the remote town of Bihangarh in UP and you have got his undivided attention.

The oil companies would play their role in moderating the price fluctuations to some degree by contracting/expanding their marketing margins. Under the APM, they enjoyed guaranteed returns. Now, the common man on the street is their bread maker and they will go all out to appease him. Of course, the name of the game is still profits. The Thai experience shows that the standard deviation (a measure of variability of a set of data about its mean value) of marketing margin for the period under consideration was 1.39 as against 3.24 for retail prices, implying a greater strain on the pocket of the consumer as against that on the revenues of the oil marketing companies.

(The author is a research associate with TERI, New Delhi)

T N Khoshoo

passes away

HT Correspondent

New Delhi, June 11

PADMA BHUSHAN awardee and former secretary to the Department of Environment, Government of India, Dr T N Khoshoo passed away on Monday. He was 75.

A distinguished fellow with the Tata Energy Research Institute (TERI), Dr Khoshoo had spent practically his entire life in the service of the nation, strengthening the foundations of important scientific organisations like the Centre for Scientific and Industrial Research and the Indian National Science Academy.

He was also one of the chief architects of the Ganga Action Plan.

Dr Khoshoo made a mark for himself through his contribution in the fields of cytogenetics and bio-diversity, and had to his credit 243 research papers published in journals of international repute dealing with genetics, biomass energy, forestry and the management of natural resources and environment.

Dr R K Pachauri, Director General of TERI, and a close friend of Dr Khoshoo said, "He was a renowned scientist who, while better known for his concerns about forestry and bio-diversity issues, always kept the human dimension as a touchstone of development."

Environmentalist dead

By Our Special Correspondent

NEW DELHI, JUNE 11 Dr T N Khoshoo, eminent environmentalist, former Union Environment Secretary, Padma Bhushan and winner of the Indira Gandhi Paryavaran Puraskar died at NOIDA in Uttar Pradesh today after a prolonged illness. He was 75 and is survived by his wife and two sons.

He was associated with several scientific institutions including the CSIR, the Indian National Science Academy and the Indian Academy of Sciences. He was a Distinguished Fellow at the Tata Energy Research Institute (TERI).

Dr Khoshoo had authored and edited numerous books on botanical research and sustainable management of biosphere, genosphere, natural resources and environment. He was awarded the United Nations Environment Project Sasakawa Environment Prize in 1996. He was one of the main architects of the Ganga Action Plan.

TERI/EV

NEWS

The Indian EXPRESS
EXPRESS Newsline ■ NEW DELHI ■ WEDNESDAY ■ JUNE 12, 2002

11260

Eminent scientist breathes his last

ENS & AGENCIES

NEW DELHI, JUNE 11

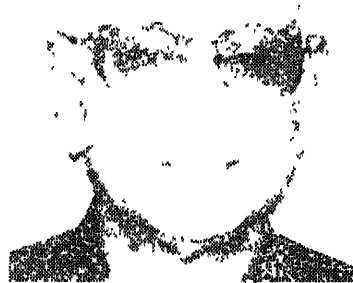
DR Triloki Nath Khoshoo, an eminent scientist who was instrumental in the development of a string of scientific institutions in the country, died yesterday. He was 75.

Dr Khoshoo, who also served as the secretary to the Government of India, is known to have contributed in strengthening the foundation of institutes like Indian National Science Academy (INSA), Indian Academy of Science (IAS) and Council for Scientific and Industrial

Research (CSIR)

A Padma Bhushan awardee, he was also a Fellow of Tata Energy Research Institute (TERI) since 1985. Expressing his grief over Dr Khoshoo's sudden demise, TERI Director General Dr R.K. Pachauri said "Dr Khoshoo was a renowned scientist who, while better known for his concerns about forestry and biodiversity issues, always kept the human dimension as a touchstone of development in mind."

Dr Khoshoo had also made significant contributions in the fields of cytoge-



Padma Bhushan Dr T.N. Khoshoo

netics and biodiversity

A recipient of the 1996 UNEP Sasakawa Environ-

ment Prize and the 1993 Indira Gandhi Paryavaran Puraskar, he was the secretary Department of Environment, Government of India from 1982 to 1985.

As the National Programme Director of Leadership in Environment and Development (LEAD), he was responsible for organising a first-rate training course for environmental and

development issues. Today, the LEAD fraternity has spread to about 10 develop-

ing nations in the world.

He was credited with having written and edited numerous books on botanical research and sustainable management of biosphere, genosphere, natural resources and environment. He also had to his credit 243 research papers which were published in journals of international repute.

The two monographs he wrote — *Mahatma Gandhi: An Apostle of Applied Human Ecology* and *Gandhi and the Environment*, record Gandhi's views on environment and its need for conservation.

EUTERI
2/6 WT**PAGE NOTES****TERI observes
Environment
Day with
MCD schools**

OVER HUNDRED students from Delhi's MCD schools celebrated World Environment Day at the TERI RETREAT (Resource Efficient TERI'S Retreat for Environment Awareness and Training) building. The students learnt about innovative green ideas based on which the building, which uses waste biomass and solar energy as sources of energy, has been constructed. Celebrations began with a mime act which sensitized the children about the importance of cleaning up the Yamuna, followed by a theatre workshop. The students also performed three plays portraying the ill effects of pollution.

A personality development workshop conducted by Dr Sameer Parikh, eminent psychiatrist, was held at Silver Line School, Ghaziabad. Various activities held during the interactive session provided the students with an opportunity to learn more about themselves and their peers.

MCD to set up 952 community toilets by June-end

TRIBUNE
OUR CORRESPONDENT

NEW DELHI, JUNE 5

The Municipal Corporation of Delhi (MCD) today announced that 952 new pay-for-use Community Toilet Complexes (CTCs) would be made functional in the walled city, unauthorised colonies and JJ clusters by the end of this month.

This was part of the World Environment Day announcements today. This is also part of the first phase of the Yamuna Action Plan (YAP). The MCD announced that these CTCs would be maintained by NGOs registered with the corporation and not the MCD staff.

The Additional Commissioner, Slums and Jhuggis (S&J), Mr Manjit Singh, said here today that the MCD was expected to

collect approximately Rs 28 lakh a month from the licence fee given by these NGOs and the money would be utilised for further maintenance work.

It was pointed out that of the 952 CTCs, 503 had already been completed, while 113 were nearing completion and 336 would be completed by the end of the month.

The CTCs would charge Rs 1 per entry and the service would be free for children below 12 years. They would be located in the JJ clusters, walled city area, Harijan and Valmiki colonies, urbanised villages, unauthorised colonies and resettlement colonies spread around 12 zones under the MCD.

Apart from the construction of the new CTCs, the MCD also plans to replace existing old and

dilapidated toilet complexes. The corporation is going to provide mobile toilets in those areas where the repair work is on.

The MCD has also proposed the setting up of a Rs 414.04-lakh electric crematorium at Sarai Kale Khan and one at Lodhi Road to reduce the pollution caused by the dumping of half-burnt bodies in the Yamuna. Such crematoria also prevent air pollution and respiratory diseases, which are caused by burning wood for the cremation of bodies.

The Chairman of the project's standing committee, Mr Ram Babu Sharma, said Delhi also needed to develop a plan for the disposal of religious materials. He added that the proportion of this waste was significant as people from different parts of the country inhabited the capital

region and they all had their own festivities.

It is estimated that the MCD would be spending Rs 2.16 crore for public participation and awareness programmes. NGOs like the Asian Centre for Organisation Research and Development (ACCORD), Tata Energy Research Institute (TERI), the Joint Assistance Centre (JAC) and the All India Centre for Urban and Rural Development (AICURD) would assist the MCD in these programmes.

Another significant contributor in polluting the Yamuna is the lack of Sewerage Treatment Plants (STPs) and ancillaries at places where about 7,500 jhuggis have been relocated.

The MCD officials said that there was little possibility of development of traditional sew-

erage facilities for next eight to 10 years in these areas. Five mini STPs would be set up at places like Bhalswa, Holambi, Bakkarwala, Tikri Khurd and Molar Band where jhuggis have been relocated. The costs incurred for the setting up of these STPs would be around Rs 5 crore. About 8,500 families are expected to benefit from these STPs.

These STPs would utilise emerging technologies like Submerged Aerobic Fixed Film (SAFF) reactors and Fluidised Aerobic Bio-reactor (FAB) technology, which have lower power and land requirement than the conventional activated sludge process.

Besides these, 10 micro STPs would also be set up at Dwarka, Hastnaal, Sultanpuri, Anand Parbat and Baljeet Nagar, the MCD added.

Meet discusses threats to health, environment

EXPRESS NEWS SERVICE
NEW DELHI, JUNE 5

THREATS to the environment and diseases resulting from them were the subjects of discussion today at the Forum on Environment, Health and Law - Coalition for a Common Cause.

The forum was organised by Bodh Raj Sawhney Memorial Trust on World Environment Day today. It was a joint effort of NGOs HRI-DAY - Health Related Information Dissemination Amongst Youth and SHAN - Student Health Action Network.

Speaking on the occasion, WHO's M M Dutta stressed the need for contests based on health to be organised regularly to create awareness. He explained through graphs and sketches how environment and development could be related. "Children's health is of prime importance," he further stated.

Centre for Science and Environment's health unit

coordinator Pranay Lal spoke on the opportunities to address burden of diseases in the country. Distinguishing between traditional and modern diseases, he said that India has so far found it difficult to eradicate even traditional diseases when other countries are trying to remove the modern ones.

Experts explained the relation between health and environment. They also said that about 60 million people in India suffered due to indoor air pollution

Giving instances of the diseases, he said that annually, there are 68 million episodes of vector and water-borne diseases in India, while about 60 million people suffer due to indoor air pollution. "Besides," he said "that there are other problems like malnutrition and other complications." He also said that poor health affects the future generation and leads to poverty.

Following this, there were presentations by organisations like TERI and WHO regarding the work that they have been doing concerning the environment. The programme was attended by students who presented papers.

State plans to revive extinct green reports

Express News Service

Bangalore, June 4

WHEN introduced two decades ago, the Karnataka 'state of the environment' reports were a pioneering effort for the country.

It provided a window to observe the status of the environment while the State rolled down the development road. But, with time, the annual report - like the environment itself - was sidelined.

Finally in 1993, with the departments of forest, environment and ecology not sustaining it, and the editor of the report - late Fr Cecil J Saldanha - falling ill, these reports

Things are in a state of flux right now but a state of the environment report for 2001-02 is on the cards'

were forgotten.

Now, a move is afoot to revive them. According to officials in the Department of Environment and Ecology, Chief Minister S M Krishna has expressed

interest in bringing out the reports on a regular basis. "Part of the reason behind abandoning the reports was the minuscule amount of funds the Department receives. A pro-

posal has been placed before the World Bank to fund the revival of the report, discussions have also been held," said an official at the Department of Environment and Ecology.

A number of agencies like the Tata Energy Research Institute and the Centre for Environment Education have reportedly evinced interest in publishing the report again. If the Department funds it.

"Even the State Pollution Control Board is keen to revive the report. Things are in a state of flux right now but a state of the environment report for 2001-02 is on the cards," the official said.

Prior to its untimely demise, Turn to Page 3

State plans to revive ..

the 'state of the environment' reports provided in-depth, balanced views on everything related to Karnataka's environment - flora fauna, the Western Ghats, mining in Kodagu, the Sarda's river, Bangalore etc - and its management. Experts like Fr Saldanha himself, who contributed to the credibility of the environment, gave the reports credence.

The report was a landmark in the report that the State Pollution Control Board has been publishing since 1993. It was a pioneering effort in the country. The report was a landmark in the report that the State Pollution Control Board has been publishing since 1993. It was a pioneering effort in the country. The report was a landmark in the report that the State Pollution Control Board has been publishing since 1993. It was a pioneering effort in the country.

// We're Full On Oil Supplies: Ram Naik

OUR INFRASTRUCTURE
BUREAU

New Delhi, May 31

Union petroleum minister Ram Naik said on Friday that the country has enough oil reserves to meet the requirements of domestic consumers and armed forces in the event of war with Pakistan.

"We have enough supplies to face any eventuality. There would not be any shortages," said petroleum minister Ram Naik at a conference on oil and gas security. Mr Naik said India maintained 60-days supply of crude oil and petroleum products. "All tanks are full. There is no concern on stocks."

India maintained around 45 days of petroleum product reserves in storage terminals and pipelines during all times and

had crude oil to meet 15 days of refinery requirements.

Enumerating the various measures that the government



was adopting to secure oil and gas supplies for the country, the minister said that the government has initiated measures like opening up exploration sector to private and foreign investment to encourage exploration and

production activities and encouraging Indian oil companies to acquire acreages abroad. He said, at present India does not maintain strategic oil reserves like the US which stocks crude oil and products at low prices for use in adverse external conditions. According to the minister, there should be security of both supply and price. The country has to be cautious of extreme price volatility since India imports 70 per cent of its petroleum requirement.

On the issue of increase in prices of diesel and petrol in the wake of current tensions between India and Pakistan, the minister refused to give any specific date. Speaking to media persons after the function, he said he would be holding discussions with the finance minister. ♦

10607

6

BANGALORE, MAY 31 An alliance of foreign and State agencies are trying to work out a "Watergy" concept, or a "Water and energy efficiency outreach programme", for Karnataka's urban local bodies (ULBs) and municipalities.

The parties involved are the Secretary, M&UDA (municipalities and urban development authorities), the Karnataka Urban Infrastructure Development and Finance Corporation (KUIDFC), the Alliance to Save Energy (ASE), USAID, USAEP, and the Tata Energy Research Institute (TERI)

At a workshop here on Friday, the agencies said ULBs and municipalities spent 60 per cent of their money on energy charges. But worldwide, it was proved that cost-effective implementation of programmes brought down energy consumption by nearly 25 per cent.

State's 208 ULBs were moving from ground to surface water sources. That would increase pumping and energy costs, he added.

He said Karnataka already had a draft urban water policy. The Karnataka Urban Water Supply and Drainage Board (KUWS&DB) was being restructured, and the board had commissioned a study on its future responsibilities. In addition, the State planned a pilot project on benchmarking civic services offered by four ULBs. The identified ULBs would be representative, size and consumption-wise, he explained.

The Managing Director of KUIDFC, Shamim Banu, said the corporation would set up an energy efficiency cell along with the ASE, USAID, and USAEP. It would train ULBs and KUWS&DB, and "disseminate information and create awareness on judicious use of water," she said.

According to TERI, the institute helped the Bangalore Water Supply and Sewerage Board (BWSSB) increase energy efficiency. TERI's Southern Region Head, M K. Halpeth, said its audit had helped the board save Rs 10 crore annually in energy savings and water.

The BWSB Additional Chief Engineer (ACE), G S. Paramashiviah, and CE, Corporate Planning, M.N. Thippeswamy, said the Cauvery and Arkavathy water systems used up 85 per cent of the board's total energy consumption. At present, power bills accounted for Rs. 12 crore of its monthly revenue of Rs 20 crore.

After the TERI audit in 1997, the board got rid of 25-year-old pumps. They learnt that energy consumption came down if pumps were not operated simultaneously, and they had replaced old electro-mechanical meters with better, electronic meters.

The ASE representative, Christopher Godlove, said the

"Watergy" concept meant "cost-effectively delivering water services while minimising water and energy use." The ASE could offer institutional and technical help to the ULBs, he added.

The USAID's N Bhattacharjee, secretary of the Bangalore Agenda Task Force and the Bangalore Mahanagara Palike to set up a "resource cities partnership" between Bangalore and an American city

Joseph Ravikumar from the USAEP said his organisation and the Department of Commerce were mulling over a similar "Sister city concept". Both USAID and USAEP supported energy efficiency projects, the officials said.

Earlier, the Chief Secretary, A Ravindra, lauded the Watergy initiative, and said a time-bound action plan was needed. Municipalities and ULBs required incentives for energy efficiency. More public awareness was also needed, he added.

We've enough petro product reserves: Naik

Our Bureau
NEW DELHI, May 31

10587

IN the backdrop of the threat of a war in the sub-continent, the Petroleum Minister, Mr Ram Naik, on Friday said that there were enough petro product supplies to face any eventuality

Addressing a seminar organised on oil security by the Tata Energy Research Institute (TERI), Mr Naik said "We have enough supplies to face any eventuality. There will not be any shortage"

India maintains 45 days of petro product reserves in storage terminals and pipelines at any point of time, besides crude oil to meet 15 days of refining requirement

On the losses being incurred by the public sector oil marketing companies due to non-revision of retail prices in the wake of high crude prices, Mr Naik said, "Currently, the public sector undertakings are marketing petroleum products in the country. They have enough profits to sustain losses. They have on their own decided not to raise prices in the interest of consumers."

'No decision yet on price rise'

Mr Ram Naik will be shortly discussing his case for a cut in excise duties as well as a rise in petro product prices with the Finance Minister, Mr Yashwant Sinha, and the Prime Minister, Mr A B Vajpayee

Speaking to presspersons on Friday, Mr Naik said that so far no decision had been arrived at and the extent of price rise would require to be discussed with the Prime Minister and the Finance Minister

PM will be consulted on oil price hike: Naik

By Our Special Correspondent

NEW DELHI, MAY 31. The Petroleum Minister, Ram Naik, today said that the issue of raising petrol and diesel prices as a result of hardening of world prices would be discussed with the Prime Minister, Atal Behari Vajpayee, and the Union Finance Minister, Yashwant Sinha, before a final decision was taken.

Giving no indication of when the prices would be raised, he said the public sector oil companies marketing petroleum products had enough profits to sustain losses. They had decided on their own not to increase the prices in the larger interest of consumers. He, however, conceded that the prices of petrol and diesel would have to be raised in view of the \$ 5 a barrel rise in crude oil prices in the international market.

Speaking at an Oil and Gas Conference organised by the Tata Energy Research Institute (TERI), Mr Naik said the Government wanted the dismantling of the administered pricing mechanism to take place in a smooth manner.

The Ministry is believed to be discussing a proposal to reduce excise duty on petrol and diesel as well as a marginal hike in prices of these products to overcome the problems being faced by oil companies since dismantling APM.

The companies have already estimated that losses would have mounted to about Rs 2000 crores by now as a result of the international prices of crude oil rising to about \$ 25 a barrel. World prices were ruling at around \$ 20 a barrel at the time of the budget when the announcement was made regarding dismantling of the APM by the scheduled date of April 1.

Mr Naik said the country had sufficient oil reserves to meet both the domestic consumer and industrial needs as well as the requirements of the armed forces. He said there were enough supplies to meet any eventuality. The country maintained a 60 days supply of crude oil and petroleum products.

All tanks were full and there should be no concern about stocks. There was about 45 days of petroleum product reserves in storage terminals and pipelines while crude oil was available to meet 15 days of refinery requirements.

ASSAM TRIBUNE

GAUHATI

1 JUN 2002

No decision yet to increase petrol, diesel prices

NEW DELHI, May 31 — Government said today no decision has yet been taken on increasing prices of petrol and diesel, necessitated following the rally in crude oil prices, reports PTI

"It's for sure that nothing (no price front) is happening today. I have yet to discuss (increasing prices of petrol and diesel) with Prime Minister and Finance Minister," Petroleum Minister Ram Naik said.

Naik, however, did not elaborate on the extent of price that would be necessary to negotiate the 5 dollar per barrel increase in crude oil prices.

Petroleum ministry sources said a twin proposal of excise duty cut and hiking price of petrol by Rs 2.50-3 per litre and that of diesel by Rs 1.50 per litre was under consideration to give relief to state-run refining and marketing companies which have been taking a dent of Rs 200 crore a month for every one dollar per barrel increase in global crude prices.

Since the proposal involves duty cuts, Finance Minister's nod was crucial, they said adding prices of petroleum products being a politically sensitive commodity, the decision would only come after approval of the Prime Minister.

Naik said he would discuss the issue of increasing prices of petrol and diesel with Prime Minister and

Finance Minister, but did not specify any time frame.

Though petroleum sector was deregulated from April 1, government has been pressuring on oil companies to maintain the current price line to ensure smooth change-over from the administered price regime to a de-controlled market.

Earlier speaking at the Oil & Gas Conference organised by TERI, Naik said "when such an important change is taking place (dismantling of the administered pricing mechanism), we desired that the changes be very smooth," Naik said.

Admitting that there was every reason that prices of petrol and die-

sel should go up, Naik said "presently the PSUs are marketing petroleum products in the country. They have got enough profits to sustain such losses. They have on their own decided not to increase prices in the larger increase of consumers."

State-run oil marketing companies Indian Oil, Hindustan Petroleum, Bharat Petroleum and IBP have together lost about Rs 1600 crore in the first 45 days of dismantling of APM on account of selling product below the cost of crude.

State-run oil retailing companies are selling petrol at Rs 4 per litre loss and diesel at Rs 3.43 per litre loss.

No decision on price hike of petrol, diesel

Pioneer News Service

New Delhi

FOLLOWING THE rally in crude oil prices, the government said on Friday that no decision has yet been taken on increasing prices of petrol and diesel.

The petroleum minister Ram Naik said, "It's for sure that nothing (on price front) is happening today. I have yet to discuss (increasing prices of petrol and diesel) with Prime Minister and finance minister."

However Naik did not elaborate on the extent of price that would be necessary to negotiate the \$5 dollar per barrel increase in crude oil prices.

Petroleum ministry sources said a twin proposal of excise duty cut and hiking price of petrol by Rs 2.50-3 per litre and that

of diesel by Rs 1.50 per litre was under consideration to give relief to state-run refining and marketing companies which have been taking a dent of Rs 200 crore a month for every \$1 per barrel increase in global crude prices.

Since the proposal involves duty cuts, finance minister's nod was crucial, they said adding prices of petroleum products being a politically sensitive commodity, the decision would only come after approval of the Prime Minister.

Without specifying any time frame Naik said he would discuss the issue of increasing prices of petrol and diesel with Prime Minister and finance minister.

Though petroleum sector was deregulated from April 1, the government has been pressuring

oil companies to maintain the current price line to ensure smooth change-over from the administered price regime to a de-controlled market.

Earlier speaking at the oil & gas conference organised by Teri, Naik said "when such an important change is taking place (dismantling of the administered pricing mechanism), we desired that the changes be very smooth."

DVB sell-off a farce: Mukhi

New Delhi Calling the Delhi state government's efforts to privatise the distribution sector of the Delhi Vidyut Board (DVB) a farce, the Delhi Bharatiya Janata Party said fresh bids should be invited from private players. Leader of opposition in Delhi assembly Jagdish Mukhi alleged there were serious flaws in the DVB privatisation process. He said the government had appointed Tata Energy Research Institute a consultant while knowing Tata Power was a bidder for distribution companies.

701-21

Mukhi cries scam, Maken says sham

Staff Reporter

New Delhi

TERMINING THE whole process to privatise the Delhi Vidyut Board (DVB) as scandalous, the Leader of Opposition in Delhi assembly Jagdish Mukhi has asked for fresh initiatives in this regard. Mr Mukhi briefed the media persons on Wednesday.

Power Minister Ajay Maken, while refuting the charges levelled by Mr Mukhi, said the Leader of Opposition was pleading the case of those patronising power theft in the capital.

Mr Maken said the whole privatisation process has been vested by the CVC, CAG and the Union Power Ministry and there was no question of any scams having taken place at all.

"Even the High Court has refused to stay the privatisation process. Mr Mukhi is raising hue and cry because privatisation is going to hurt the interests of power thieves," Mr Maken claimed. Mr Mukhi, however, said "The whole process smacks of scandalous involving a huge amount exceeding Rs 5000 crore. Thus, the privatisation process be immediately scrapped and fresh bids be invited," Mr Mukhi told the reporters. Charging the chief minister Sheila Dikshit and Power Minister Ajay Maken with concealing various facts, Mr Mukhi said "There is no transparency in the whole process. The government seems to be in a hurry to favour the bidders." The bidders include Tata Power and BSFS Ltd.

"How the government could engage TERI for the DVB's asset valuation when Tata Power is a bidder. Didn't the government know that TERI is an offshoot of Tata," Mr Mukhi asked. "This should have been done by one of the government approved companies engaged in asset valuing," he added.

To this charge Power

Minister Maken said "It was surprising that Mr Mukhi did not know that it's not TERI but SBI Caps, an undertaking of State Bank of India that worked as evaluators and advised us on the process of privatisation."

IN BRIEF

Rs 2,000 crore Japanese aid for cleaning Yamuna on the cards

NEW DELHI The government will soon get Rs 1,500-2,000 crore assistance from Japan for the second phase of the Yamuna Action Plan aimed at cleaning the 22 km stretch of the river along the Capital. "We are in the final stages of negotiation with the Japan Bank of International Co-operation for assistance for the second phase of the Yamuna Action Plan," Union minister of environment and forests T R Baalu said at a workshop organised by the Tata Energy Research Institute here on Monday. The second phase of the Yamuna Action Plan proposes to divert the 19 main drains and 38 tributary drains discharging wastewater in the river, set up additional sewage treatment capacity with decentralised approach and disinfect treated sewage. (PTI)

New Delhi, Beijing Set Up Eminent Persons Group

SANJAY SARDANA

New Delhi, May 21

New Delhi and Beijing have set up an eminent persons group (EPG) to explore ways for doing business between the two countries through Track-II diplomacy.

The 14-member Indian delegation will visit China next week to take up various issues through the Track-II diplomacy and discussions are expected to take place in a more relaxed atmosphere as views expressed are that of the individuals and not the nation.

The EPG, an initiative under the foreign ministry, aims at a very high level interface among the members without the direct presence of any government official.

The purpose, however, is to send out signals to the governments on how they can work together. The EPG has been set on the lines of the Indo-EU Council, which also has 14 members on each side. The Indo-EU forum meets twice a year.

The Indian delegation, which had met about a month ago, and represented by eminent businessmen, media personalities and researchers, will visit China for three days from May 27-29.

"EPG has been set up comprising various leading personalities coming together from various fields and does not have any government restraints, which results in more open and frank discussions," Ficci secretary-general Amit Mitra told *FE*.

"The interactions of such groups between countries aims at opening up windows of new opportunities and can even offer solutions where differences exist, and can be taken up through the Track-I diplomacy," Dr Mitra pointed out, adding these groups can be very productive and can offer solutions to contentious issues in an amicable way, which cannot be taken up by the governments.

Continued on Page 14

New Delhi, Beijing Set Up Eminent Persons Group

Continued from Page 1

The Chinese side has already expressed interest in setting up engineering institutes there on the model of Indian Institute of Technologies. The two sides have also expressed keenness to increase the media reporting about each other.

The Indian side is represented by Infosys chairman and executive officer NR Naraynmurthy, and its members also include Tata Energy Research Institute director RK Pachauri, Mukand Limited chairman Rajesh V Shah, India-China Chambers of Commerce president Murah S Deora, All-India Council for Technical Education chairman R Natrajan, India Today editor Prabhu Chawla, IDSA senior research officer Sujit Dutta, and former ambassador to China C Dasgupta.

The forum is also represented by industry chambers. Apart from Di Mitra, Director-General, Confederation of Indian Industry, Tarun Das is also a member.

Former vice-foreign minister Liu Shuqing is the chairman on the Chinese side. Other members are China council for the promotion of international trade vice-president Wan Jifeng, China National Metals and Minerals Import & Export Corporation president Miao Gengshu, former ambassador to India Cheng Ruosheng, Global Times editor Wu Yingchun, and All-China Federation of Industry and Commerce vice-chairman Liu Yongghao.



Plan for strategic oil reserves revived

P Vaidyanathan Iyer
NEW DELHI, 21 MAY 96

The Prime Minister's Office (PMO) has revived an earlier plan to build strategic petroleum reserves to insulate India from disruptions in oil supply. The move assumes significance given the country's aggressive military posture.

Simultaneously, the PMO has decided to constitute a group to take a relook at the problem of hydrocarbon security. Government officials told *Business Standard* the need for maintaining strategic oil reserves was revisited at a recent meeting with the petroleum ministry.

There was a unanimous view that against the mobilisation along the border, it was imperative for the country to build a contingency plan. "The plan will address three specific areas of concern

long-term disruption of oil supply, prolonged spike in crude oil prices and the persisting conflict in West Asia," said a senior official.

The PMO, along with the petroleum ministry, had roped in the Oil and Natural Gas Corporation and the Gas Authority of India Ltd to study the various aspects of hydrocarbon security, officials said. "Security aspects relating to the place from where crude is procured, its routing into India, the technological options available and

storage modes will be studied," a source said.

While the PMO is awaiting a report from the Institute of Defence Studies and Analysis on certain security aspects concerning the preservation of oil reserves, it has decided to appoint a consortium of research agencies, including the Tata Energy Research Institute, to study the issue of hydrocarbon security.

Gold touches 7-year high

Mounting tension on the Indo-Pakistan border triggered buying by stockists, lifting gold prices by Rs 60 to a seven-year high of Rs 5,310 per 10 gram.

- Plan for aviation
- Trade war not to hurt
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- Final solution: BJP
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CLIMATE CHANGE: New IPCC Head Defends His Impartiality

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Newly elected Intergovernmental Panel on Climate Change chief **Rajendra Pachauri** has defended himself, in an interview with the BBC, against allegations that his ascension to the post was aided by support from oil companies

Earlier reports indicated petroleum and automotive interests lobbied on behalf of Pachauri in order to get rid of his predecessor, **Robert Watson** of the United States, who was seen as critical of those industries. Pachauri rebutted the charges. "If you go back to the record, I have been very critical of some elements of the oil industry," he said.

Commenting on criticism of the Kyoto Protocol on climate change lodged by the United States and others, the Indian engineer and economist told the BBC, "Everybody does realize that perhaps the Kyoto Protocol is not a perfect agreement, but it's a step forward. It's better to have it than not to have it." In terms of the U.S. decision not to ratify the treaty, Pachauri said, "It's ultimately civil society in the U.S. that is going to determine what needs to be done. We haven't heard the last word on that. I think, by and large, the public in the U.S. now certainly believes that there is climate change taking place."

He added that countries must now decide what action to take in a second wave of measures following Kyoto. "I think that the science must provide a compelling reason and a logic to take those steps," he said, "and this is what I hope the IPCC will be able to do in the future" (BBC Online, May 17).

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14 Monday, May 20, 2002

Are hot summers here to stay?

Press Trust of India
NEW DELHI, May 19

AS the mercury continues to soar across peninsular India causing nearly 500 deaths, the debate whether the country is heading towards a climatic change is getting fierce even though expert opinion is divided over attributing the current heat to global warming.

While the country's Meteorological Department categorically denies that the sweltering heat indicates a change in climatic trends, several researchers say patterns over the last few years reflect a trend towards rising temperatures, which could impact upon the socio-economic activity of the people.

"There are no significant anomalies indicative of a change in the climatic trend," says S.R. Kalsi, Deputy Director General of IMD, attributing the prevailing heat condition to small changes on intra-regional scales.

"One can only say this with some degree of probability and not with complete certainty," says R.K. Pachauri, newly-elected chairman of the Inter-Governmental Panel on Climate Change (IPCC). "But there are too many pointers indicating a change in climatic trends," he says, adding that all over the world it has been established that the climate is changing.

In a similar vein, C.K. Varshney of the School of Environmental Sciences, Jawaharlal Nehru

University, observes that "there is a general perception, which is uniform, that there is a shift in climatic realm the winters are getting milder and in summers the intensity of the heat is progressively getting severe."

Researchers say patterns over the last few years reflect a trend towards rising temperatures, which could impact upon the socio-economic activity of people in the region.

While Varshney sees this searing season as a result of the global phenomenon of warming due to the increase in the concentration of carbon dioxide, Kalsi ascribes the prevailing heat to "local disturbances". According to him, had the larger issues such as global warming been responsible, "the temperatures will rise every year".

While Varshney says there are very few studies done in India to this effect, Pachauri, who was the Vice-Chairman at IPCC, says, "It has been established that the 90s were the hottest decade of the last millennium."

The third assessment report of IPCC says the 20th century witnessed an increase in the frequency and intensity of droughts in Asia and Africa in its recent decades.

The overall index for hot days has also increased while that of cold days decreased for all land areas while overall precipitation has increased between five and 10 per cent in the northern hemisphere over the last century.

According to the report, most of the warming has been observed over the last 50 years and is attributable to human activities.

BBC i

BBC NEWS

You are in **Sci/Tech**

Front Page Friday, 17 May, 2002, 15:39 GMT 16:39 UK

Climate chief defends independence



'Scientist not policymaker' - Rajendra Pachauri

The new head of the world panel assessing the nature of climate change has rejected charges that his appointment is a victory for oil firms

"If you go back to the record, I have been very critical of some elements of the oil industry," Indian engineer and economist Dr Rajendra Pachauri told the BBC

Everybody does realise that perhaps the Kyoto Protocol is not a perfect agreement

Dr Rajendra Pachauri

He defends the Kyoto Protocol - designed to reduce human influence on the global climate - as being better than nothing, and says the panel's job is to provide compelling evidence for the need for countries to make new commitments to fight global warming

Dr Pachauri was elected to his job in controversial circumstances last month. The result left green groups complaining of underhand tactics on the part of the US Government and its oil lobby supporters.

GLOBAL WARMING

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'Better than nothing'

"Everybody does realise that perhaps the Kyoto Protocol is not a perfect agreement, but it's a step forward.

IPCC
Climate Change (BBC
Hot Topics)

"It's better to have it than not to have it," the new chair of the Intergovernmental Panel on Climate Change (IPCC) told the BBC.

The BBC is not responsible for the content of external internet sites

He said he would not be too worried if the US did not ratify the protocol, as public pressure would play a part in shaping its policy

"I think by and large the public in the US now certainly believes that there is climate change taking place

China denies manned Moon mission plan

'Countries must decide'

New whaling sanctuaries rejected

"It's ultimately civil society in the US that is going to determine what needs to be done. We haven't heard the last word on that."

Bald chicken 'needs no plucking'

Dr Pachauri said the IPCC's job was a scientific one, not a political one, but that its findings should provide impetus for policy makers

Global gamers gather at E3

"It's really for countries themselves to decide what is to be done."

'Super soap' in the pipeline

There was a need for a dialogue on what commitments nations should make in a second wave after Kyoto, he said.

Turning pictures into password

"I think that the science must provide a compelling reason and a logic to take those steps, and this is what I hope the IPCC will be able to do in the future," he added

Mass arrests over online child porn

Links to more Sci/Tech stories are at the foot of the page.

Election row

Dr Pachauri took over the chair of the IPCC from the outspoken Dr Robert Watson in April.

Dr Watson's removal sparked a huge row, with environmentalists accusing the US Government of conducting a campaign to have him sidelined

They said the Bush administration was irked by Dr Watson's forthright views on human-induced climate change and the need for America to cut its greenhouse gas emissions

The green lobby claimed a memo passed by ExxonMobil to the Bush administration calling for Dr Watson's removal demonstrated the oil industry's influence in the White House.

The oil company said the memo had not been written by one of its employees and insisted it had no official position on who held the chair of the IPCC

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नलकूपों के अंधाधुंध खनन से भी उपजा है जल संकट

■ प्रमोद भार्गव

कुछ समय पूर्व आधुनिक मशीनों से की गई नलकूप क्रांति अब नवाही की सूचना साबित हो रही है। अंधाधुध नलकूपों के गहरीकरण को तत्काल नियंत्रण में लेते हुए इसके वैकल्पिक उपाय नहीं तलाशे गए तो 21वीं सदी का पहला दशक जबर्दस्त जल संकट और जल प्रदूषण का कारण होगा। टारा एनर्जी रिसर्च इंस्टीट्यूट (टेरी) के अनुसंधानपरक एक अध्ययन से साबित हुआ है कि भूमिगत जल के आवश्यकता से अधिक प्रयोगों से भावी पीढ़ियों को कालांतर में जबर्दस्त जल समस्या का सामना करना होगा।

अध्ययन के अनुसार 1945 में कोई एक हजार के करीब नलकूप पूरे देश में थे, जिनकी संख्या अब 65 लाख से ऊपर है। सस्ती अथवा नि शुल्क बिजली देन से नलकूपों की संख्या में और बढ़ोतरी हुई है। पंजाब, मद्रा, राजस्थान, हरियाणा सरकार ने किसानों को मुफ्त बिजली देकर नलकूप खनन को बेवजह प्रोत्साहित किया। इस उत्खनन के चलते पंजाब के 12 और हरियाणा व मद्रा के तीन-तीन जिलों से पानी ज्यादा निकाला जा रहा है, जबकि वर्षा जल से उसकी भरपाई नहीं हो पा रही है। गुजरात के मेहसाणा और तमिलनाडु के कोयंबटूर जिलों में तो भूमिगत जल एकदम खत्म-सा हो गया है। हरियाणा के कुरुक्षेत्र और महेन्द्रगढ़, मद्रा के खडवा, खरगोन एंव भिंड जिला में प्रतिवर्ष भू-जल की सतह आधा मीटर नीचे खिसक रही है। गहरे में पेटे इस जल को ऊपर खींचने में ऊर्जा भी ज्यादा खर्च हो रही है। अकेले मद्रा में प्रतिवर्ष खोदे जा रहे कुओं और नलकूपों के आकड़े देखने पर पता चलता है कि कुओं और नलकूपों दोनों का खनन सरकारी और गैर सरकारी दोनों ही मोर्चों पर युद्ध स्तर पर हो रहा है।

मद्रा और छत्तीसगढ़ के सभी 61 जिलों में हर साल लगभग दो लाख 80 हजार कुओं और 25 हजार नलकूपों का खनन किया जाता है। एक अनुमान के मुताबिक इस खनन में प्रदेश के सहकारी बैंकों का करीब एक हजार करोड़ और प्रदेशभर में शाखाएं खोले बैठे राष्ट्रीयकृत बैंकों का करीब 900 करोड़ रुपए लगा हुआ है। इस धनराशि में वह राशि शामिल नहीं है, जो 1991-92 के बीच प्रदेश में भाजपा सरकार द्वारा चलाए गए 'ऋणमुक्ति अभियान' के अंतर्गत माफ कर दी गई थी। इसके अलावा निजी स्तर पर करोड़ों रुपए नलकूप खनन में लगाए जा रहे हैं। बिखरे हुए

उद्योगों के रूप में मौजूद यह खनन क्रांति बतौर एक जम्बाती जुनून की तरह फिलहाल परवान चढ़ती जा रही है। इस क्रांति के परिणाम लाभ की दृष्टि से उतने लाभकारी नहीं रहे हैं, जितने अनुपात में इस क्रांति से जल स्तर घटा है और प्रदूषण की आकांक्षाएं बढ़ी हैं। एक नलकूप पांच से लेकर दस कुओं तक का पानी सोख लेता है।

जल विशेषज्ञ और पर्यावरणविद भी अब मानने लगे हैं कि जल स्तर को नष्ट करने और जल धाराओं की गति अवरुद्ध करने में नलकूपों की प्रमुख भूमिका है। नलकूपों के खनन में तेजी आने से पहले लबालब पानी बहुता था, लेकिन सफल नलकूपों की पूरी एक श्रृंखला तैयार होने के



टाटा एनर्जी रिसर्च इंस्टीट्यूट के एक अध्ययन के अनुसार नलकूपों के अंधाधुध खनन से भी जलसंकट बढ़ा है। इस खनन के चलते ही गुजरात के मेहसाणा और तमिलनाडु के कोयंबटूर जिलों में तो भू-जल एकदम खत्म हो गया है। यह एक चेतावनी है। हमें अभी चेत जाना चाहिए।

बाद कुएं समय से पहले सूखने लगे। पूरे मद्रा में अप्रैल-मई तक आधे से अधिक कुएं सूख चुके होते हैं। भूमि संरक्षण विभाग के अधिकारियों का इस सिलसिले में कहना है कि भूमि में 210 से लेकर 330 फीट तक छेद (बोर) कर दिए जाने से धरती की परतों में वह रही जलधाराएं नीचे चली गईं। गहरे नलकूपों का खनन करने वाली रिंग और गेज मशीनों के चलने से धरती की परतों का बहुत बड़ा क्षेत्र प्रकंपित होता है। इससे अवरिल बह रही जल धाराओं पर प्रतिकूल प्रभाव पड़ा और जल धाराओं की पूरी संरचना अस्त-व्यस्त होकर बिखर गई, जो जल स्तर स्थिर बनाए रखने में सहायक रहती थी। हालात इतने बदतर हो गए हैं कि जल स्तर 300 से 800 फुट की गहराई तक चला गया है। जिस कारण पेयजल

और सिंचाई दोनों के ही संकट विकराल होते चले जा रहे हैं। समरी तरफ नलकूप खनन से जीविका और धन अर्जन करने वाला अना गंगा ताकतवर मशीनों से खनन कर रहे हैं, जिनकी खनन क्षमता एक हजार फुट तक है और ये आठ इंच तक का चौड़ा छेद करती हैं। लिहाजा यह निश्चित है कि ये मशीनें जलस्तर और जल प्रदूषण की समस्या बढ़ाएंगी ही, क्योंकि अधिक गहराई से निकाले गए जल में अनेक प्रकार के खनिज और लवण घुले होते हैं और जल की सतह पर जहरीली गैसें छा जाती हैं, जो अनेक रोगों को जन्म देती हैं। ये गैसें गहरे कुओं के लिए और भी घातक हैं। भिंड जिले के कुओं में हर साल जहरीली गैसों का रिसाव होता है। पिछले सात-आठ सालों के भीतर यहां दो दर्जन से ज्यादा लोग जहरीली गैसों की गिरफ्त में आकर प्राण गवा चुके हैं।

कठोर चट्टानों की जटिल संरचना वाले मध्यप्रदेश में भूजल संवर्धन की अवधारणा इसकी विविधता के कारण निश्चित पहचान रखती है। प्रदेश का ज्यादातर पश्चिमी हिस्सा लावा निर्मित बेसाल्ट चट्टानों से निर्मित है, जिसका सकल क्षेत्रफल 1.43 लाख वर्ग किमी है, जो प्रदेश के क्षेत्रफल का करीब एक-तिहाई है। भू-जल की उपलब्धता की समस्या झाबुआ जैसे जिलों में जहां वर्षा का औसत 80 सेंटीमीटर से कम है, और जटिल हो जाती हैं। यही कारण है कि जिले के कुल 1374 गांवों में से 1254 सूखे की चपेट में हैं। इस साल मालवा-निमाड क्षेत्र में गर्मी बढ़ने के साथ-साथ सूखाग्रस्त इलाके का और विस्तार होता जा रहा है। धार जिले के कुल 1579 गांवों में से 400 सूखे से प्रभावित हैं। बड़वानी जिले के 749 गांवों में से 559 और खरगोन जिले के 1408 गांवों में से 930 सूखे से प्रभावित हुए हैं।

भू-वर्गीय जल भंडार के बेतहाशा दोहन के कारण मुंबई में भी खारे पानी का खतरा मंडराना शुरू हो गया है। मुंबई में इसी तेजी से पीठे पानी का दोहन होता रहा तो दस साल के भीतर खारा पानी भी नहीं रह जाएगा। भूमिगत जल कम होने की हानि केवल यही नहीं है कि उसका दोहन खर्चीला होता जा रहा है, बल्कि यह भी है कि इस जल की बड़ी मात्रा प्रदूषित भी होती जा रही है। अंधाधुध नलकूपों को गहरा करने की प्रक्रिया पर तत्काल नियंत्रण लगाकर इसके वैकल्पिक उपाय नहीं तलाशे गए तो 21वीं सदी के पहले दशक में सबसे जबर्दस्त संकट जल की कमी और जल प्रदूषण का होगा।

- **Regulation in Infrastructure Services — Progress and the Way Forward;**
S.K. Sarkar, Kaushik Deb — Editors;
Tata Energy Research Institute, Dar-
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Sick of power cuts? There's worse ahead

By Sanjay Dutta
Times News Network

NEW DELHI Fed up with power cuts? Worried sick by wild fluctuations in supply? Well, you've seen nothing yet. By the end of this year, Delhi is estimated to need 3,500 mw (megawatt) but can at best hope to get 2,600 mw from all possible sources.

This, of course, is nothing new. Delhi loves to splurge and consumes thrice the national average.

This means that an appliance used for 15 minutes elsewhere in the country, is used for thrice that amount of time in Delhi, a study by private energy sector think-tank TERI has said.

The supply-demand gap has, thus, been widening 10 per cent

every year, with each resident on an average consuming 1,000 watts of power an hour (kWh). Last summer, Delhi recorded a peak demand of 2,879 mw and could get 2,700 mw.

The Delhi Vidyut Board expects a peak demand of 3,200 mw this summer.

But the maximum supply that it can hope for to meet this demand is only 2,730 mw, leaving a gap of 480 mw.

The supply includes 350 mw

from the Indraprastha power house, 200 mw from the Pragati power plant, 600 mw from the Badli thermal power station, 1,400 mw from the Northern Grid and 180 mw from other central utilities.

Theoretically, Delhi can also get 70 mw from the Malana power plant in Uttar Pradesh, about 100 mw from the Eastern Grid, 100 mw from Himachal Pradesh, 100 mw from Uttarakhand and 100 mw from Chhattisgarh. But there is no link with the eastern grid for bringing this power to the city.

Why has the situation come to such a pass?

It is simply because no effort has been made to increase generation capacity, while transmission and distribution (T&D) losses have risen from 22.6 per cent in 1992-93 to 46.8 per cent in 1997-98.

This figure includes losses resulting from DVB's inefficiencies in collecting its bills. In comparison, T&D losses in Mumbai stand at 11 per cent, while in Kolkata it is 19 per cent.

Indeed, T&D losses have been the bane of DVB which is sinking under mounting losses on account of falling revenues and rising expenditure.

POWER STRUGGLE

- By the end of the year, Delhi would need 3,500 mw but can only arrange for 2,600 mw
- Each resident consumes 1,000 w per hour on an average
- Transmission & distribution losses was 46.8 in 97-98, 1% reduction means an extra Rs 70 crore
- Delhi can get more power from UP, Chhattisgarh, Eastern Grid, Uttarakhand and Himachal, but lacks supply lines

Privatise regulation

■ This refers to the article "Why we need a water regulator" jointly written by S K Sarkar and Kaushik Deb (ET, May 7). I feel that what we basically need is 'Regulation' (as a synonym for good governance) rather than regulators. So is the case in the power sector. But populism and official lethargy continue to nourish the phenomena of unsustainable economic patterns in water and other utilities.

Given that the government has failed to regulate utilities in a sustainable manner, it has

become evident that we need independent regulation. That will enable these sectors to function with financial independence, and without the need to look for official subsidies. What is also almost certain is that such independent regulation will create a balance of forces and make it more attractive for the private sector to invest in these sectors. Ironically, the government has not been able to ensure safe drinking water for all citizens even 55 years after we won our bid for self-governance.

Given the legitimacy of entry, the private sector would of course want to get some returns on the capital employed. But even here, just the simple act of ensuring that there is metering at each point of consumption, along with billing efficiency, can work wonders.

There are solutions to the issue of supplying all sections of society pure and safe potable water. They can be identified and cross-subsidised with differential-pricing.

VINAYAK R PANDEY
Jaipur, May 8,

Low Income Groups Should Get Funds For Clean Fuel: Pant

OUR ECONOMIC BUREAU

New Delhi, May 9

Low-income households should get more local micro credit for switching to clean fuels, Planning Commission deputy chairman K C Pant has said.

Speaking at a workshop on household energy, indoor air pollution and health organised by the World Bank and Tata Energy Research Institute (TERI) in the Capital on Thursday, Mr Pant said though generally people preferred cleaner fuels, a transition to clean household fuels would come only as a consequence of economic development. "Such a transition can be accelerated if clean fuels are made available at affordable cost."

The World Health Organization (WHO) ranks the sustained household exposure to burning solid fuels as the fourth highest global risk to health after malnutrition. World Bank South Asia region vice president Mieko Nishimizu pointed out at the workshop.

"Literacy, electrification of rural communities, using better stoves and clean fuels can prevent over 1.2 million deaths of women and children in East and South Asia every year," Ms Nishimizu said.

She added that as women were the core of the rural life in the provision and use of household energy, they should be empowered through social mobilisation in technical and policy choices.

DAINIK JAGHAN

NEW DELHI

- 6 MAY 2012

सस्ते व सुरक्षित परिवहन के लिए विनियामक प्राधिकरण बनेगा

आलोक गौड़, नई दिल्ली

7 मई

सरकार ने दिल्ली में सार्वजनिक परिवहन संचालित करने और जनता को सस्ती व सुरक्षित परिवहन सुविधा मुहैया कराने के लिए स्वतंत्र दिल्ली सार्वजनिक परिवहन विनियामक प्राधिकरण गठित करने का फैसला लिया है। दिल्ली की परिवहन व्यवस्था के बारे में रिपोर्ट तैयार करने वाले टाटा एनर्जी रिसर्च इंस्टीट्यूट (टेरी) ने अपना विनियामक प्राधिकरण गठित करने की सिफारिश की थी। टेरी की रिपोर्ट का व्यापक अध्ययन करने के बाद सरकार ने अब प्राधिकरण गठित करने का फैसला ले लिया है।

प्राप्त जानकारी के अनुसार दिल्ली सार्वजनिक परिवहन विनियामक प्राधिकरण राजधानी के रेल व सड़क परिवहन दोनों की व्यापक योजनाएं बनाएगा। यह यात्री किराया निर्धारित करने के साथ ही डीटीसी के डिपो व टर्मिनल की सुविधा का लाभ उठाने वाले आपरेटरों से लिए जाने वाले शुल्क की दर भी तय करेगा और सार्वजनिक बस सेवा के मार्ग व नेटवर्क का भी निर्धारण करेगा। इसके अलावा सभी प्रकार की परिवहन प्रणाली के बारे में सुरक्षा व सेवा के मानक निर्धारित कर उन्हें प्रभावशाली ढंग से लागू करने और विभिन्न आपरेटरों को मार्ग आवंटित करने की भी जिम्मेदारी भी निभाएगा।

सार्वजनिक परिवहन में निजी क्षेत्र किस्म

प्रकार अपनी जिम्मेदारी निभाएगा और एक आपरेटर के पास कम से कम कितनी बसें होनी चाहिए, इसका फैसला भी प्राधिकरण द्वारा ही लिया जाएगा। प्राधिकरण सार्वजनिक परिवहन प्रणाली के तहत चलाने के लिए बसों की व्यवस्था भी करेगा। वह लाइसेंस के नियम व शर्तें तैयार

■ टेरी की रिपोर्ट के अध्ययन के बाद सरकार ने यह फैसला किया

■ प्राधिकरण रेल व सड़क परिवहन दोनों की व्यापक योजनाएं बनाएगा

■ सार्वजनिक बस सेवा के मार्ग व नेटवर्क का भी निर्धारण करेगा

■ नियम व शर्त का पालन न करने वाले आपरेटरों के लाइसेंस रद्द करने का भी अधिकार

करने के साथ ही यह भी सुनिश्चित करेगा कि उनका उल्लंघन न होने पाए। प्राधिकरण को नियम व शर्तों का पालन न करने वाले आपरेटरों का लाइसेंस निरस्त करने का भी अधिकार होगा। उसकी सिफारिश के अनुसार राज्य सरकार को कार्रवाई करनी होगी। प्राधिकरण सार्वजनिक परिवहन की जरूरतों का अनुमान लगाने के लिए व्यापक सर्वेक्षण कराएगा और इस संबंध में आवश्यक आकड़े संग्रहित करेगा।

प्राधिकरण सरकारी नीति के अनुसार गिरायती बस पाम व अन्य गिरायते लागू

करने संबंधी योजना बनाएगा और इस संबंध में आपरेटरों की दी जाने वाली सब्सिडी तय करेगा।

साथ ही आपरेटरों के बीच स्वस्थ प्रतियोगिता को बढ़ावा देने के संबंध में कदम उठाएगा ताकि जनता को सुरक्षित व बेहतर सार्वजनिक परिवहन सेवा मुहैया कराई जा सके। वह सार्वजनिक परिवहन सेवा का उपयोग करने वाले यात्रियों के हितों की रक्षा करने के साथ विभिन्न आपरेटर व उन्हें बुनियादी ढांचा उपलब्ध कराने वालों के बीच पैदा होने वाले विवादों का निपटारा भी करेगा।

वाहन तकनीक विकसित करने, विकलांग, वरिष्ठ नागरिक, महिला व बच्चों को विशेष सुविधाएं देने सहित सार्वजनिक परिवहन उद्योग के बारे में प्राधिकरण राज्य सरकार के सलाहकार के रूप में काम करेगा। वह इन सभी मुद्दों पर राज्य सरकार के मांगने पर या फिर स्वविवेक के आधार पर सलाह देगा।

प्राप्त जानकारी के अनुसार सरकार राजधानी की सार्वजनिक परिवहन प्रणाली विशेष रूप से बस समस्या का स्थायी समाधान चाहती है। इसलिए उसने इस बारे में नीति बनाकर उन्हें क्रियान्वित कराने के लिए परिवहन विनियामक प्राधिकरण गठित करने का फैसला लिया है। सरकार का मानना है कि इस काम में यह प्राधिकरण महत्वपूर्ण भूमिका अदा कर सकेगा।

E

IDENT

पहचान

BUSINESS LINE

NATIONAL FRONT

MAY 4 1991

Panel on energy calls for integrated policy

G. Srinivasan
NEW DELHI, May 4

THE Planning Commission Steering Committee on Energy has called for evolving an integrated approach to each sub-sector such as power, coal, petroleum, natural gas, atomic energy and renewable through the creation of a Cabinet Committee on Energy and making international benchmarking mandatory for all sub-sectors.

The Steering Committee, headed by Member, Planning Commission, Mr N K Singh, is understood to have underscored the need for such an integrated approach for the energy sector.

This is mainly because there are "overarching issues" such as capital and operational efficiency, amount and nature of subsidies, environmental emissions, rehabilitation that need to be addressed across all sub-sectors.

A Cabinet Committee on Energy comprising the Ministries of Power, Coal, Petroleum and Natural Gas, Non-Conventional Energy Sources, Finance, External Affairs, Railways, the Department of Atomic Energy, Planning Commission as members is needed to approve policy and oversee implementation.

Official sources told *Business Line* here that a key role of the Cabinet Committee should be to manage the trade-offs between the divergent objectives that could supervene between the dif-

ferent sub-sectors, at all times ensuring consistency with the high-level policy goals concerning economic efficiency, energy security, access and the environment.

On the need for rendering global benchmarking mandatory for all sub-sectors, the Steering Committee is of the view that since the energy sector is not subject to competitive market forces and is dominated by the public sector, a near-term reduction in energy costs could be achieved only if these organisations are "incentivized" to achieve globally acceptable benchmarks of economic efficiency.

It is of the view that such an attempt would enhance the market valuation of these PSUs and thus spur inflows when the Government divests its stake.

As part of an integrated approach, the Steering Committee is of the view that all subsidies be shifted explicitly to Central/State Budgets since such a targeted approach would preclude distorting market-based pricing mechanisms, which would ensure more optimal and economic resource allocation, sources said.

Alongside, it is understood to have plumped for fostering environmental standards and enactment of "a transparent Regulatory and Legislative framework that allows easy enforcement of these standards".

Touching on private participation, the Steering Committee suggested mea-

sures such as according infrastructure status to coal mining, coal washing, pipelines, terminals and LNG facilities and phased withdrawal of Government ownership from PSUs dominating the energy sector, besides extending the tax concessions available to the power generating companies to transmission and distribution and selectively to other energy sub-sectors.

Underlining the need to quicken the pace of deregulation in the energy sector, the Committee is reported to have contended that even as the long-term emphasis on privatisation should be maintained, the Government might not have an option other than stepping up public investment during the Tenth Plan.

This is largely because of the continued bankruptcy of the State sector power utilities, the continued absence of an effective, transparent and independent regulatory regime that generates confidence among private investors in the power sector and continued delay in passing the electricity and the coal bills.

Pointing out that the stress in the energy front has so far been on supply side management and very little attention to demand side management, the N K Singh Committee's suggestion include tariff and price rationalisation, mandatory energy audit in industry, replacing energy inefficient pumps in the agricultural sector, improving end-use efficiency of traditional fuels, mandating

energy efficiency levels in transport vehicles, and shifting traffic from road to rail mode.

The Committee, while deliberating the level of dependence on import energy, opined that the imported component of primary energy should be kept in the range of 20-25 per cent of the total primary energy requirement.

A higher level of import dependence was deemed as being detrimental to the country's energy security and balance of payments.

While it might be feasible to keep import reliance at or below 25 per cent during the Tenth Plan, it might rise to the 30-40 per cent range by the end of the Eleventh Plan unless the country manages to raise coal production by 75 per cent, more than double its hydro generation and more than triple the output from renewable sources over the next decade.

Though this assumes only marginal increases in oil and gas production over the next ten years, it is still a daunting task, the Committee said adding that slower than projected demand growth, major oil/gas discovery under National Exploration Licensing Policy II or NELP III, equity oil and continuing improvement in the country's hard currency reserves would be 'mitigating factors'.

Apart from Mr N K Singh, the Steering Committee comprises Secretaries of the Union Government, besides experts, like Mr T L Sankar, Dr R K Pachauri.

Use Of ICT Can Help Reduce Poverty Baalu

IMPROVED governance by using Information and Communication Technology could have a direct impact in reducing poverty and safeguarding the environment, according to I R Baalu, Minister of Environment and Forests. Mr Baalu was addressing the inaugural session of a workshop on Information and Communications Technology and Environment in Asia and the Pacific (ICTEAP), organised by the Confederation of Indian Industry (CII), Ministry of Environment and Forests, United Nations Environment Programme, and Tata Energy Research Institute (TERI).

Dr Klaus Topfer, executive director, UNEP, said that efficient application and accessibility of ICT would help reduce the digital divide especially in the rural areas.

Dr R K Pachauri, director general, TERI, said that ICT would not only provide a common gateway for providing information and knowledge to enhance the South-South cooperation but could also help in tackling the root cause of poverty in the rural areas.

APTRI asked to provide data on climate change

Newstoday

Hyderabad: The state government has asked the study centre of climate change, located in the premises of Andhra Pradesh training and research institute (APTRI) at Gachibowli here, to keep it informed regularly about its studies and suggest concrete measures if warranted so that the government could scientifically plan cropping pattern and so on. Principal secretary to the forest and environment HS Brahma told 'Newstoday' on Saturday

that experts were predicting that there would be drastic increase in temperatures in future and the main sufferers of this climate change would be the farmers and the poor

Andhra Pradesh needed studies from time to time to set right things at the right time. Brahma said the climate changes would directly affect the food production, livestock and other sectors. With APTRI's data the agriculture and horticulture departments would be conducting their studies for the benefit of the farmers

Brahma said the state forest and environment departments were serious about the analysis revealed at the

three-day South Asia experts workshop on climate change, which concluded in New Delhi on Friday. In this workshop, director-general of Tata energy research institute (TERI) RK Pachauri stated that the rise in temperature by a few degrees Celsius over the years had increased food prices due to a slowing down in the expansion of global food supply relative to growth in global food demand. The climate change had lowered

incomes of the vulnerable populations and increased the absolute number of people at risk of hunger

Pachauri stated there would be a rise in temperature by 1 degree Celsius every 10 years and the change in climate would severely affect the livelihood of people in future.

The change in climate would affect crop yields, besides affecting indirectly soil moisture, food distribution and frequency of infestation

The principal secretary stated that a comprehensive study on climate change would provide a facility to the state to take precautionary measures to divert the farming sector to go for suitable crops.

GOVT BID TO PLAN CROPPING PATTERN

Centre set to estimate Green GDP

Mamata Singh
NEW DELHI, 3 MAY

ALMOST 10 years after the United Nations and the World Bank developed alternate macro-indicators for environmentally adjusted and sustainable national income and products, the Centre is finally making efforts to estimate Green gross domestic product (GDP), or environmentally adjusted GDP, which includes the valuation of natural resources.

Green GDP is based on the system for integrated environmental and economic accounting devised by the UN's statistics division, and seeks to illustrate the inter-relationships between the environment and the economy. "Calculated in this way, the value of a tree in India comes to around Rs 7 lakh," says minister for statistics Maneka Gandhi. "The value of a tree is not measured only in terms of the timber it produces. It would include the value of the oxygen it generates and the sulphur di-oxide it absorbs, both of which have a direct impact on the health of the people living in an area," she adds.

At present, cutting down trees for commercial use adds to the gross national product, but the depletion of natural resources is not accounted for. The department of statistics has just completed a pilot project on natural resources accounting, which aims at developing a valuation method for economic activities like mining. While benefits are measured in terms of the money earned, the costs include not only wages and capital costs, but also the increase in water and soil pollution, deforestation and depleted level of reserves use.

Rough estimates by various organisations put the natural resource cost of a productive activity at around 5 per cent of the GDP, officials said.

Tata Energy Research Institute, in its project called GREEN India 2047, had estimated that the country was losing over 10 per cent of its GDP on account of environmental costs every year. It had also estimated that 11 per cent-26 per cent of the country's agricultural output was being lost on account of soil degradation.

HOW MUCH DO WE NEED?

PRAGYA SINGH

Delhi may be shedding crocodile tears when it comes to complaining about water shortage. "Yes, less water than necessary is at our disposal," feel experts, "but the shortfall can easily be made up for." Here's how

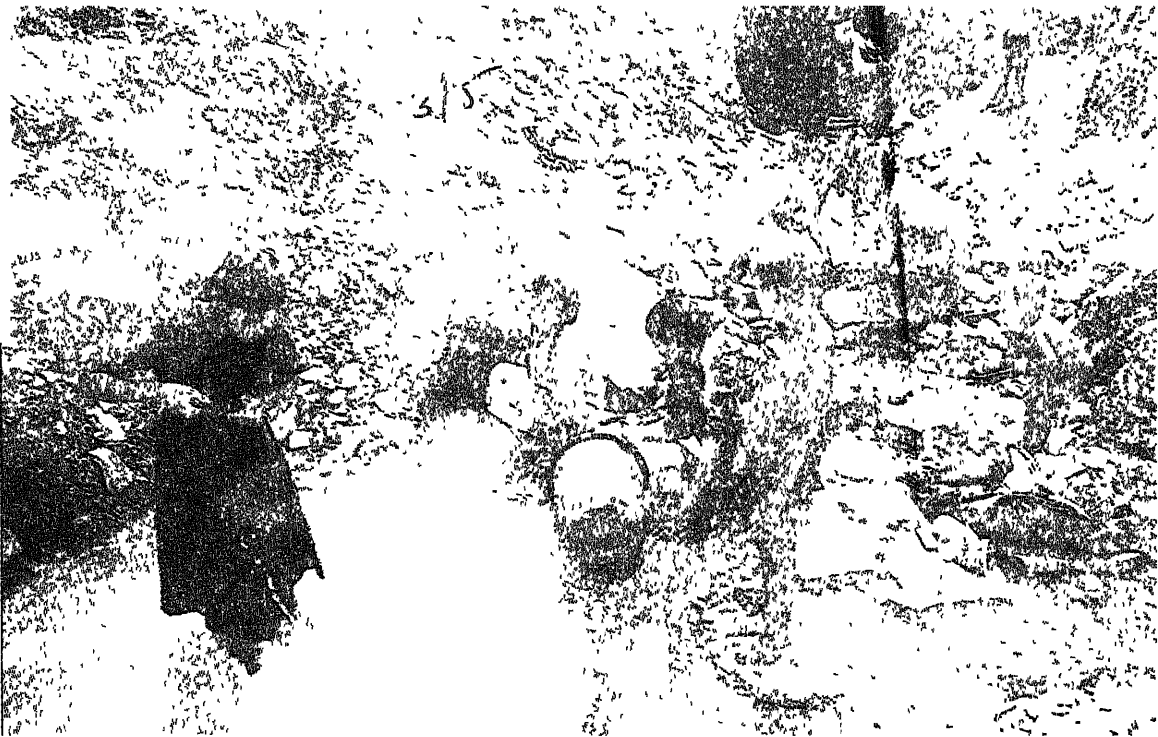
The Capital is home to 10 million people, who need around 3,324 million litres per day (mlpd) but are only being supplied 2634 mlpd, creating a shortfall of 690 mlpd. Average per capita water consumption in the Capital is 240 litres per head, higher than in any other part of the country. Even the existing surface water supply from the Delhi Jal Board (DJB) is not equitably distributed, with the New Delhi Municipal Corporation (NDMC) and Delhi Cantonment areas getting an average supply of above 450 lpcd but parts of Narela and Mehrauli zones receiving less than 35 lpcd.

According to figures published by the Centre for Science and Environment (CSE) in 2000 (revised in 2001), Delhi gets 11 per cent of its water supply from ground water, 17 per cent from Uttar Pradesh, 19 per cent from Haryana and the remaining 53 per cent from the Yamuna. However, city officials and NGOs have also started claiming that Delhi relies for 30 to 40 per cent of its water needs on ground water.

This is because private bore wells installed in homes and industries are speeding up water shortage by illegally tapping water stored within porous rock or subterranean "rivers". So the message being sent out by NGOs and researchers is "use

ground water by all means, but first conserve the available supply, supplement subsurface water by recharging the ground water. In short — save, conserve and share your water."

But Delhi also receives an annual rainfall of approximately 612 mm, which brings us to the solution to our drinking and cleaning problems. "Conservation is the beginning of replenishing sub-surface water," says Ravindra Singh, engineer and research associate with CSE's Natural Resource Management team. He explains, "People use fresh water to wash their cars every day. The water cisterns in middle and upper



Continued on page 3

Activity	Method Adopted	Quantity used (litres)	Method to be adopted	Quantity required (litres)	Quantity saved (litres)
Washing Hands	Running tap for 2 min.	18	Half filled wash basin	2.0	16.0
Shaving	Running tap for 2 min.	18	Shaving mug	0.25	17.75
Shower	Letting shower run while soaping	90	Wet down Tap off	20.0	70.0
Flushing toilet	Using old fashioned large capacity cistern	13.5 or more	Dual system short flush liquid waste, Full flush solid waste	4.5 9.0	4.5 plus
Watering plants	Running hose for 5 min	120	Water can	5.0	115.0

How much do we need?

Continued from Page 1

class toilets use 11 litres of water even though just one litre is enough. This lack of awareness is behind water shortage in the Capital."

Kapil Kumar Narula, Area Convener, Water, with the Tata Energy Research Institute says, "Tube wells installed at homes are a main cause of water depletion. They sometimes run for 24 hours, clearly indicating that people need to be educated further. If people were made to pay for their supply of water like they do for electricity, then they would value it more."

Sumita Das Gupta, NRM coordinator at CSE explains how a culture of saving water can be instilled among Delhi residents. Says she, "Today, almost all new homes have installed bore wells. Rather than digging deeper with every season, they should use the existing supply carefully and replenish this water through rain water harvesting. Unfortunately, no efforts are being made to recharge the ground water or to store rain water."

Narula explains the utility of rain water in a city like Delhi, "Rain water can be stored and used later for watering plants, cleaning floors and other tasks that don't require drinkable

supply."

Adds Sumita, "Delhi and most of North India depends upon 17 days of monsoons for their supply of water. It would not be possible to store water enough for the whole year since storage would be a problem. Therefore, Delhi should concentrate on replenishing the ground water that is used everyday with rain water."

"Ground water depletion has been at an alarming rate for the last four decades, with around eight metres declining in the last ten years alone," says Sumita, adding, "with the government failing to respond adequately or create enough awareness. There are no policies to check the illegal use of ground water or the pouring of

effluents into the earth either."

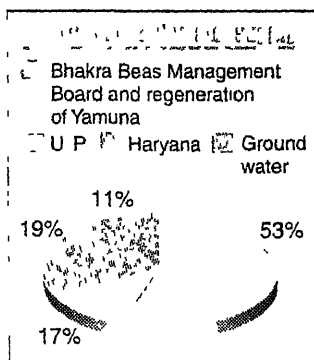
CSE experts also point out glaring loopholes in building bylaws that leave no option to residents besides the use of scarce ground water resource. Says Ravindra, "I found out recently that the DDA and NDMC, authorising agencies for constructions in the city, do not consult the DJB before buildings are sanctioned. Thus, the government does not even take into account whether people living in an area can be fed water or not."

TTRI's Narula has his own story, "The municipal infrastructure to carry water has up to 15 per cent physical losses and 40 per cent of its water supply remains unaccounted for. Therefore, there is an even

stronger need for water harvesting."

But how effective are attempts to refurbish ground water? The average daily drinking water requirement of a person being 10 litres, a single 100 sq m plot of land can yield double of what a family of five needs, assuming that only 60 per cent of the annual rainfall over Delhi is effectively harvested. "We implemented a rain water harvesting programme in our own office in 1999. The water level has not gone down since then, though it has not increased either, because of the many new buildings in the neighbourhood."

CSE has calculated the total rain water harvesting capacity of Delhi at about 907 billion litres annually, equal to about 270 days of water requirement for the entire city, which has an area of 1,486 sq km.



RECHARGE STRUCTURE	APPROXIMATE COST (Rs)
Recharge pit	2,500 — 5,000
Recharge trench	5,000 — 10,000
Recharge through handpump	1,500 — 2,500
Recharge through dugwell	5,000 — 8,000
Recharge well	50,000 — 80,000
Recharge shaft	60,000 — 85,000
Lateral shaft with borewell	
shaft per metre	2,000 — 3,000
Borewell	25,000 — 35,000

UNEP launches study on IT's link with pollution

Our New Delhi Bureau

NEW DELHI 2 MAY

THE United Nations Environment Programme (UNEP) today launched a critical examination of the linkages between information and communication technologies (ICT) and environmental protection with the UNEP executive director Klaus Toepfer calling for South-South partnerships and identification of specific projects based on "best practice" cases in the Asia Pacific region. Dr Toepfer called the three day workshop on ICT-environment linkages that began in the Capital today, a build up to the August world summit on sustainable development in Johannesburg, but added that one must guard against buzzwords like sustainable development and ICT.

Firstly, sustainable development was often confused with growth, whereas the parameters for the developed and developing world were quite different. "We have to agree on practical ways to improve quality of life and environment, not just quantity of consumption," he said, quoting US nature advocate Edward Abbey, "growth for the sake of growth is the ideology of a cancer cell." Secondly, ICT had become a fashionable term—a standard integration into most high level statements and declaration adopted by high level fora. However the enormous "data" generation and relatively useless "information" available through ICT tools had only provided an alibi for policy makers to procrastinate on policy matters.

Minister for environment and forests T R Baalu who earlier spoke at the conference co-sponsored by the government, TERI and CII had said that while looking for solutions to issues like solid waste management, and air pollution monitoring, the government was confronted with the task of handling voluminous and complex data.

UNEP explores infotech use for ecology

By OUR CORRESPONDENT

New Delhi, May 2: The United Nations Environment Programme is examining the links between Information and Communication Technologies and environmental protection in a workshop that began in New Delhi on Thursday. The two-day workshop, being conducted at the India Habitat Centre, is being jointly organised by UNEP, the ministry of environment and forests, the Indian government, the Confederation of Indian Industries and the Tata Energy Research Institute.

This is the first meeting of its kind in the Asia-Pacific and is being attended by UNEP executive director Klaus Toepfer, environment ministers from India, Sri Lanka and Cambodia, and leaders from state govern-

ments, civil society and business. Mr Toepfer said the workshop opens up a host of questions regarding the potential of technological innovation to address global environmental problems. For example, UNEP announced last month that nearly 50 glacial lakes in the Himalayas were at risk of bursting their banks due to climatic changes, thereby risking thousands of lives. Such predictions were possible through computer analysis of high resolution data, remote sensing and Geographic Mapping Systems mapping techniques.

Apart from environmental problems, UNEP said that ICT has also come to the rescue of other problems. In the South Indian state of Pondicherry, the setting up of community Internet booths has brought about health and economic benefits. Women

in such areas now have easy access to information on enhanced healthcare for themselves and their children, while men gain increased returns for their products through better knowledge of market prices. Whether in the case of ICT or other technologies, UNEP has found the capacity to absorb and adapt to ICT high, particularly among women.

Trends in ICT can greatly reduce environmental and economic costs. Enhanced connectivity enables people to transact businesses from their homes, save commuting time and energy and reduce pollution from transportation. Mobile networks help bring about "hard wired" infrastructure.

"It is these connections between environment and science, environment and community participation, environment and trade that UNEP is drawing attention to in the

build-up to the World Summit on Sustainable Development in Johannesburg in August," Mr Toepfer said.

The workshop will examine successful ICT applications in the Asia-Pacific context and develop strategies to extend their benefits. These include online training packages for environment technology assessment projects developed by the UNEP to enable planners and policy makers to access information about the environmental impacts of technologies, the Demonstrator Applications Grants Scheme in Malaysia which has provided seed funding for innovative environment and development applications of ICT, and applications such as LEARNZ which has taken school children to some of the world's most remote natural reserves through the Internet and teleconferencing.

IT workshop

NEW DELHI The use of information and communications technology in environmental management and governance was the focus of a regional workshop which began here Thursday as a joint initiative of the environment ministry, CII, TERI and the UN Environment Programme (TNN)

Strategies being evolved for farm development

Press Trust of India
NEW DELHI, 1 MAY

CONCERNED OVER the severe stress on Indian agriculture due to climatic changes, the government today said adaptation strategies and resource conserving technologies were being evolved for sustainable farm development and improved productivity through low-cost mechanisms.

"Arable land is also under considerable stress due to demographic pressure, soil degradation, urbanisation, erosion and conversion into non-agricultural use. Every year over 5.3 billion tonnes of topsoil is estimated to be lost in India due to erosion," agriculture minister Ajit Singh said.

Inaugurating a workshop on "Adaptation to Climate Change for Agricultural Productivity", he said measures were being taken to contain biotic pressures on land and to control indiscriminate diversion of farmland for non-agricultural purposes.

He said there was no room for complacency despite a record foodgrain production of over 211 million tonnes as the rainfed areas in the country still suffer from low yields and unstable production.

Top priority was being given to sustainable development of rainfed areas through integrated watershed development, Singh said, adding that the current strategy for development of rainfed areas was based on the concepts of conservation of rainwater and promotion of farming systems.

The three-day seminar was addressed among others by minister of state for agriculture Hukumdeo Narayan Yadav, executive director of United Nations environment programme Klaus Topfer, Dennis Garrity of the International Centre for Research in Agro-Forestry and R K Pachauri, chairman of the Inter-Government Panel on Climate Change.

Sanskriti School On the occasion, TERI organised a painting competition. Shohel Talukdar of Rai School had won a prize and received the prize from chief minister, Mrs Sheila Dikshit at a grand function organised by TERI at Habitat Centre on April 22.

DVB clarifies

NEW DELHI The Delhi Vidyut Board (DVB) on Tuesday said it is consistently supplying above 2,800 mw (megawatts) of power daily and has made arrangements to supply up to 3,200 mw, if required. With reference to a report, "Sick of power cuts? There's worse ahead," DVB's Chief Public Relations Officer V K Sharma clarified that DVB does not expect the demand to exceed 3,200 mw this year. DVB supplied 2,989 mw on May 2. Its transmission and distribution losses were 48.61 per cent as per the finalised accounts for the year 1997-98. According to the finalised accounts for 2000-2001, the losses stand at 45.64 per cent. The accounts are yet unaudited, but it is clear that the earlier rising trend has been reversed.

(We stand by our story)

What experts say

PIA SETHI, RESEARCH ASSOCIATE
Department of Forestry and
Biodiversity, TERI

- Residents of neighbourhood areas, NGOs and rag-pickers need to be involved in the clean-up programme. No plan shall be successful until the locals are involved.
- Municipal bodies should be proactive, and should monitor and provide support.
- Parts of the Ridge come under various civic departments. They should be made responsible and more vigilant. Violators should be dealt with strictly.

All this can happen only when the government issues required instructions and takes the initiative.

Also, appropriate species of shrubs and trees should be planted. Plantation of undergrowth (lacking in the western part of the Ridge) is a must. But care should be taken to prevent weedy undergrowth, like Congress grass. Thorny shrubs, like those in the Dhaula Kuan region, are perfectly in tune with the environment.

US emissary lobbies with India on climate change

By Chandrika Mago
Times News Network

NEW DELHI On a day when the government sought to reassure Parliament it had "not welcomed" US backtracking on a globally negotiated route to check climate change, the Bush Administration's senior climate negotiator was in town, explaining his government's widely-criticised views and discussing areas of possible cooperation with India.

Negotiator Harlan Watson's visit, which has environmentalists wondering, is the first by Bush Administration climate change officials India, incidentally, is to host the eighth conference of parties to the UN Framework Convention on Climate Change (UNFCCC) later this year and officially hopes for early ratification of the Kyoto Protocol, which commits developed countries to reduce the 'greenhouse gas' emissions which have triggered potentially cata-

strophic global warming

Watson, special representative, Bureau of Oceans, Environment and Scientific Affairs in the US department of state, has a packed schedule on Monday and Tuesday, meeting officials in the Prime Minister's office, external affairs, environment, power, petroleum and non-conventional energy sources ministries

Outside government, Watson and his team met representatives of the NGO, Centre for Science and Environment, on Monday. Also scheduled is a meeting with the Tata Energy Research Institute chief R K Pachauri, the man the US backed against an American incumbent to chair a UN-mandated global climate panel

On Monday, there was an important meeting with Union environment secretary P V Jayakrishnan and his colleagues in the ministry. Ministry officials were tightlipped, saying discussions would continue on Tuesday. "We have not zeroed

in on anything yet." A US spokesman said the team would be "looking for ways to enhance cooperation on climate change."

Environmentalists say the US has subverted the Protocol effectively by saying it will not clean up the mess it has helped create.

In Parliament, environment minister Baalu described America as the world's largest emitter of greenhouse gases. In 1990, it accounted for more than 36 per cent of developed country emissions, and its emissions have continued to grow.

The Protocol provided for emission reduction commitments of seven per cent, on a 1990 base by the US. But the US has backed out, citing economic burden, the exemption of developing countries like India and China from specific commitments and "scientific uncertainty."

Thus opposition, Baalu said, would hit global efforts to combat climate change.

TELEGRAPH

CALCUTTA

29 MAY 2002

THE GREEN OLYMPIAD

The Telegraph 29 May 2002



A wake-up call to students — get your school to participate in India's one and only green contest. Prithvijit Mitra clues you in on how to become an environment ambassador

Thanks to global warming and ozone hole, the greener world campaign is no longer an environmentalist's domain. It has spread far and wide and even penetrated school curriculum. Tree-planting ceremonies have become a ritual in most schools. Taking that a step further, you now have a unique home-grown 'Olympics' that spurs students to unravel the mysteries of nature and learn the conservation mantra. If you are a nature freak, here's a challenge for you. The Green Olympiad, launched by the Environmental Research Institute (TERI) in 1999, kicks off this week. The two-pronged contest comprising a test on environment and a nature quiz begins on May 30 at Dubai. It will be followed by Kathmandu on June 5 and finally India on August 24. Over the last three years, the Green Olympiad has been spreading environmental awareness among thousands of schoolchildren not only in India but other Asian countries as well. This green exercise has generated a massive interest among the students. Last year's contest saw a ten-fold rise in the number of examinees. Nearly one lakh nature enthusiasts took part last year, both from the metros and also from the remote areas of Arunachal Pradesh, Andamans, Nagaland, Sikkim, Jammu and Kashmir. Conducted by TERI in association with Hero Honda Motors Ltd, the Ministry of Environment & Forests with Kendriya Vidyalaya Sangathan and CMC Ltd as partners, this exam is designed to encourage environmental understanding and vigilance.

Contestants from the leading 32 schools in the test are selected to compete in the Terraquiz which is broadcast by Doordarshan. Last year's Terraquiz included winners from overseas centres who came to India as 'environment ambassadors'. TERI director-general Dr R K. Pachauri says that the aim is to plant 'trees of sustainability' in the minds of the young generation. "As environment is a global issue, the Olympiad has been extended to other parts of the world," he says. The test, which is the first part of the contest, contains questions that evolve from topics of daily concern — air and water pollution, environmental-friendly initiatives and practices, land and water resources, forests, wildlife, oceans, social and economic aspects of natural resources, global climate change, and the roles to be played by various segments of society to improve our environment.

PIONEER
LUCKNOW
24 APR 2002

Summer brings Delhi's water woes back

Ehtashamuddin Khan

New Delhi

RAJENDER Singh is up with the larks to fill all the buckets in his home in the Indian capital so that his family of seven has water to drink, for household chores and, if lucky, to bathe with.

The early bird adage is true for Singh, and millions like him in this water-starved city every summer. "Whoever wakes up first is the lucky one," Singh, a resident of Taimoor Nagar in south Delhi, told IANS.

What makes things worse is that he is racing against 50-odd tenants in the building he owns for a few pails of water. "We get water only in the morning. It comes for about 30 to 45 minutes. It is difficult to manage with just a few buckets-full."

Summer has only just set in and already taps across the city of 15 million have run dry. Residents of neighbourhoods that generally get water twice a day say they consider themselves lucky if a thin stream

trickles through their taps once. Experts warn that things will only get worse as the season progresses.

Said Chethan Kumar, a clerk who lives in south Delhi's Lajpat Nagar neighbourhood. "I come late at night and then have to wake up early. Water comes at around 5.30 am and it hardly lasts 30 minutes. I store water for a day at least. You never know what the situation will be like tomorrow." A study by the Tata Energy Research Institute (TERI) says the capital is heading for a severe crisis with the groundwater level in many parts falling drastically and salinity increasing, making the water unfit for drinking and bathing.

TERI says the Delhi Jal Board, the state utility that supplies water, has become incapable of catering to the capital's galloping population. An estimated 400,000 people come to this city every year. The major cause for the crisis, according to TERI, is improper management of water supply. Delhi gets 650 million gallons of water daily against its demand of 800 million gallons. Nearly 60 per cent of the water comes from the river Yamuna, which flows through the city's east.

Poor supply from the DJB has forced people to draw groundwater through tubewells, violating a court ban. Adding to their difficulties, and costs, is the fact that at some places the groundwater level has receded by 10 metres over the past 20 to 25 years.

Said former mayor Shanti Desai. "There were problems earlier too but the situation has worsened in the last 10 years. The population has increased. We have not been able to do much." But experts say the water crisis in Delhi could be tackled with proper management and planning. "About 40 per cent of the water in Delhi is lost in distribution. We need to prevent this loss and conserve by harvesting rainwater," said Kapil Kumar Narula of TERI, who conducted the water survey. The DJB insists there is no shortage of water, only problems in distribution. Said its spokesperson. "We are trying to minimise distribution losses. We are also going to build underground reservoirs to store water."

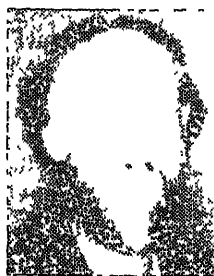
(IANS)

Time to focus on climate change & food security

Sudha Nagaraj

NEW DELHI 23 APRIL

BEING the first developing country representative to head the prestigious Intergovernmental Panel on Climate Change (IPCC) comes at the right time for Indian environment expert Rajendra K Pachauri. Taking over as chairman of the international programme under the UN Environment Programme and World Meteorological Organisation at a time when environment is occupying centrestage in the world economy, he has a single point agenda — to push regional issues to the top of the agenda and to stress the economic cost-benefit analysis of every aspect of climate change management. "Scientific aspects and physical documentation of data alone will not help mitigate the ill-effects



of climate change," he told **ET** here today. Dr Pachauri, who is director general at Tata Energy Research Institute, is aware that there are serious environmental hazards that are unattended in the region. Only a concerted effort to bring it into the civic consciousness would help the IPCC's otherwise purely "research, knowledge gathering and recommendatory" efforts, he concedes. Since its inception in 1988, the IPCC has brought out three climate change assessment reports. While the first two led to the UN Convention on Climate Change and the Kyoto Protocol respectively and the third completed

much of the relevant groundwork, the fourth effort may well lead to concrete and workable solutions, it is hoped.

Dr Pachauri has five years to prepare the fourth assessment of climate change by 2007. Off the cuff he mentions monsoon variations, precipitation problems, coastline degradation, receding glaciers and depleting water resources in the sub continent as the first year agenda.

Having served as vice-chairman of the IPCC since 1997 (for four years) he thinks it fit to draw global attention to the impact of climate change on food security and agricultural practices in South Asia. "It's not enough to tackle the issue at the problem level alone, a rethink on the impact side is called for," he points out. Elaborating further, he says a good impact management plan would strategise methods for the long-term (say two decades). "If a cer-

tain crop cultivation is becoming difficult under changed climatic conditions, one should switch over to another, say wheat well on time."

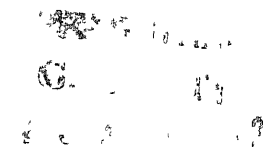
The 'one shoe fits all' approach is a no-no for this Padma Bhushan recipient. If the objective is to reduce greenhouse gas emissions, it's not enough to list out options like natural gas, renewable forms of energy, fuel technology and so forth. The potential for mitigation opportunities and barriers to these options vary between regions, time and even sectors. "Efficiency and economics has to be co-related," he adds.

Seen in the context of the US opposition to Kyoto Protocol, one naturally asks if the developing world has found a fair negotiator at last but Dr Pachauri protests, "I am stateless. As head of executive body of the 192-member organisation I would disseminate information on matters that concern the whole world," he says.

It had been later added. The collapse was blamed on the weight and the moisture. **DPA**

PACHAURI IS HEAD OF UN PANEL

NEW YORK Indian environmentalist Dr R K Pachauri has been elected chairman of the United Nations' Inter-Governmental Panel on Climate Change, the top world body on environment. Dr Pachauri, who was the vice-chairman of the panel, defeated its current chief Dr Robert Watson of the USA by an overwhelming majority at the election held in Geneva on Friday. It would be the first time a developing country would be heading the world body. **UNI**



TERI to organize Green Olympiad

GUWAHATI, April 22: The Tata Energy and Research Institute (TERI) will be organizing the Green Olympiad 2002 across the nation in over 300 cities and towns including 20 centres of North-eastern region on August 24, stated a press release. The Green Olympiad is India's only national level environment examination which is not only an annual exercise designed to test the knowledge of students but also to educate and sensitize them on issues that are critical to the environment, the release added.

Pledge for a green earth

By Our Staff Reporter

NEW DELHI, APRIL 22 Coming together for the 'green' cause, schools, non-governmental organisations and private organisations reaffirmed their commitment towards conserving and saving the environment by celebrating Earth Day today.

While Navdanya, an NGO decided to bring in the young brigade to the fore by joining hands with over 200 schools from across the country, the Indian Environmental Society kicked off a week long campaign with poster competition, essay writing, rally and news watch declamation as some of its event highlights.

The Navdanya campaign will have children take part in a number of activities including forest mapping and identification of medicinal plants that will lead to the selection of around 10 leaders who will finally participate in the UN backed world summit on sustainable development in Johannesburg later this year.

A note of caution was also made as Navdanya reiterated its opposition to Parliament giving the go-ahead for planting genetically engineered Bt Cotton. The NGO alleged that the Gov-



The Delhi Chief Minister, Sheila Dikshit, at an exhibition of paintings by school children on Earth Day celebrations in New Delhi on Monday. Photo: S Subramaniam

ernment while clearing the proposal had failed to take into account the socio-economic impact of Bt Cotton trials in the last few years.

The Delhi Chief Minister, Sheila Dikshit, while speaking at the annual TERI Earth Day celebrations urged more institutions to come forward and help the Government in protecting the Capital's resources. A series of events were held for school children by TERI last past week, with a number of competitions being held to mark the day.

Giving the environment awareness programme a touch of entertainment, students of the Western Music Club today presented a musical rendering "Heal the world". Students of the Delhi Public School on the other hand staged a play highlighting the reckless misuse of environment. The students were later shown Mike Pandey's "Shores of the young- sters in working towards creating a healthier and safer environment."

HINDU

INDRAS

23 APR 2007

Not beholden to anyone, says Pachauri

By Our Special Correspondent

NEW DELHI, APRIL 22 The Chairman of the Tata Energy Research Institute (TERI), Rajendra K Pachauri, who was recently elected as the Chairman of the Intergovernmental Panel on Climate Change (IPCC), today denied suggestions that he would side with the United States on issues relating to climate change because the U S had supported his candidature over that of Robert T Watson, a U S citizen, who was seeking re-election.

"The U S is not the only country that had supported



R.K. Pachauri

me. My support base included Russia, countries in Asia, Africa, the Central Asia and also Latin America. I

appreciate the gesture of all of them. But I would not be beholden to anyone," he said, addressing a press conference after assuming charge of his new post.

Dr Pachauri is the first person from the developing world to become the head of the prestigious international organisation, which was set up in 1988 jointly by the World Meteorological Organisation and the United Nations Environment Programme. Its role is to assess the scientific, technical, and socio-economic information relevant to the understanding of the risks of human-induced climate change for the benefit of the

world community and, in particular, to its member-countries. A total of 192 countries are members of the panel. Dr Pachauri, who polled 76 votes as against 49 by Dr Watson, sought to downplay the controversy that surrounded the election. A section of the U S media had suggested that the Bush Government was backing Dr Pachauri because his views were more in tune with that of automobile and energy sectors.

Describing the charges as "baseless", Dr Pachauri said that he had great regard for Dr. Watson and would work with him. "I was one of the

three Vice-Chairmen of the panel till now, and I had a good equation with Dr Watson. The relationship would continue," he said.

Asked about the Kyoto Protocol, which the U S has been refusing to ratify, Dr Pachauri said the Protocol was not the beginning of the end of the reduction of the greenhouse gases. The world has to go beyond the Protocol.

The problem had to be solved by steering clear of narrow agendas and contradictions. Pachauri said his priority would be to highlight the socio-economic impacts of climate change, which had got the required attention.

Climate impact on society key thrust, says Pachauri

EXPRESS NEWS SERVICE
NEW DELHI, APRIL 22

WIDE awareness of socioeconomic impact of climate change would be the thrust of the Intergovernmental Panel on Climatic Change (IPCC), its newly-elected chairman Rajendra K. Pachauri said today.

Pachauri, Tata Energy Research Institute (TERI) director-general, is the first Indian and the first from any developing country to be elected chairman of IPCC since its inception in 1988 by World Meteorological Organisation and UN Environment Programme.

His election had triggered controversy because the US — which walked out of the Kyoto Protocol — supported his nomination. His rival, Robert Watson, was critical of the US government's stand on climate change.

Pachauri, elected to lead the executive body of the 192-member

world organisation, said climate change was a global problem to be tackled with a global view. "Kyoto Protocol of 1997 could not solve all the problems of climate change. It has limitations," he said.

The IPCC assesses factual information available on climate change, including science, impact, economics and mitigation/adaptation possibilities. Its priority is to help information on climate change and related data analysis reach people to sensitise them. Pachauri said the IPCC budget recently hiked its allocation for outreach programmes.

"Outreach of climate data is important. Society must be sensitive about what's going to happen to global climate. No country can ignore it," he said. Pachauri would lead the expert body in preparing the fourth assessment of climate change, expected in 2007.

He plans to sensitise developed countries such as the US, Europe, Japan and Australia about energy

consumption patterns to help reduce emission of greenhouse gases. According to Pachauri, the IPCC does not research climate change but considers various scientific bodies' research on the subject collate them and on that basis makes recommendations. It could encourage research in a particular field.

As IPCC chairman, he would try for more regional emphasis, Pachauri said. He said he would try to maintain policy-neutral, independent IPCC's image as credible, objective and purely scientific body.

The IPCC's recent 19th session in Geneva elected a new bureau comprising Pachauri and three vice-chairmen from Russia, Sri Lanka and Kenya. Three working groups and a task force too were elected.

On the US opting out of the Kyoto Protocol, he said "I am not concerned about what the US would do to reduce greenhouse gas emissions."

IPCC to highlight socio-economic impact of climate change

Our Bureau

NEW DELHI, April 22

AGAINST the backdrop of developed nations unwilling to commit themselves on reducing pollution — the newly elected chief of the Inter-Governmental Panel on Climate Change (IPCC) and the first from a developing region — Dr R K Pachauri, has a daunting task on his hands

Interfacing with mediapersons in the Capital after his election as the next IPCC Chairman at its 19th session in Geneva, he admitted that even the high-profile Kyoto Protocol had its limitations in terms of the issues that it addressed

However, he said that the



Dr R K. Pachauri

Kyoto Summit had made a beginning. The Kyoto Protocol had used information provided by the IPCC's Second Assessment Report on Climate Change 1995

The IPCC's Fourth Assessment Report is

expected by 2007 and Dr Pachauri is expected to hold his new office for about six years

Responding to queries on how he would deal with countries such as the US which were among the largest polluters in the world, given that they were also the funders of the IPCC, he said that IPCC distanced itself from the negotiations of climate change

The panel merely provided its assessment based on the existing data and researches and this was not binding on the 192 member-countries, he said

Dr Pachauri, steering clear of political agendas and controversy, said that his priority would be to highlight

the socio-economic impact of climate change. He felt that the developed world was increasingly realising that no one region can be immune to the adverse fall-out as the impact was felt worldwide

He said that the budget for the outreach of information on climate change had been increased substantially for the current year. The overall funding for IPCC amounted to about 7-8 million Swiss Francs, he said

IPCC would look at generic issues with a global impact and hence, while they would look at the rising sea level and its effect on islands such as the Maldives, it would also look at the receding glaciers of the Himalayas from a global perspective

US did not make me UN climate body chief: Pachauri

‘Although I appreciate American support, I am not beholden to any nation for this post’

By OUR CORRESPONDENT

New Delhi, April 22: The newly-elected chairman of the Intergovernmental Panel on Climate Change, Teri director-general R K Pachauri, is trying hard not to court any controversies after his election to the prestigious UN body.

He said that after his election to the UN body, he will have to cultivate the art of silence on many issues.

“I am now a stateless person. I have to look after the interests of 192 nations represented in the IPCC. I cannot comment on any policy of a single country,” Dr Pachauri explained, hinting at the US stand on Kyoto Protocol. He was addressing the media in New Delhi on Monday, Earth Day.

“Every society has to be sensitive to the threat of global warming. No area can remain isolated from others. Anything that affects one nation will affect others too, in one way or other,” he added.

The Bush administration has refused to ratify the Kyoto Protocol and did not nominate former chairman and British-born US atmospheric scientist Robert Watson and supported Dr Pachauri’s candidature. This led to intense international media speculation that the US oil majors were backing Dr Pachauri’s candidature.

Clearly hurt by these allegations, Dr Pachauri said “I am quite well known in the US and it could be they backed me as they thought I was capable of holding the post.”

However, refusing to comment

on the allegations, the 61-year-old engineer, economist and environmentalist was on the defensive. He said “The IPCC election was through a secret ballot. It wasn’t as if the US had to tell the developing nations to vote for me and they would do so. Anyway I had a strong support base of Asia, Africa, Russia, Central Asia and even some Latin American countries.” “There was strong sentiment in favour of my election. They felt that I was the right person to highlight the Third World issues,” he added. Emphasising that the IPCC does not carry out research nor monitor climate-related data, Dr Pachauri said all its reports are based on assessment of peer-reviewed and published scientific & technical literature.

When asked to comment on the US stand on Kyoto Protocol, he said “I am not concerned by what the US might do in the IPCC, all the decisions are taken by consensus, and if a country dissents, the final report will also have a mention of that nation’s point of view.”

Refusing to react to leakage of the Exxon-Mobil memo to the White House that his predecessor, British-born US atmospheric scientist Robert Watson had to be removed from the IPCC, the UN body which advises governments and the intergovernmental negotiating committee for UN Framework Convention on Climate Change, Dr Pachauri said “Although I appreciate the US support, I am not beholden to any nation for this post.” Saying that he

faced enormous pressure to agree to a co-chairmanship with Dr Watson, who had support of many European nations, the Teri director-general said, “I refused to accept that I have enough to do, I told them I am not hankering after a title.” Dr Pachauri, who was vice-chairman of the UN body for the last five years, is the IPCC’s first chairman from a developing nation since it was established in 1988. His tenure as the IPCC chairman, according to him, will last between five-six years. “I will be around till after the IPCC presents its Fourth Assessment Report on Climate Change,” he said. The fourth IPCC report is expected to be released in 2007. Dr Pachauri credited his win to the hard work of the diplomats at India’s permanent

mission to the UN in Geneva. “It is my privilege as an India nominated member for this post,” he added. Although the IPCC is negotiating co-chairmanship with the Framework Convention on Climate Change can make requests for special reports, but it has no say in what matter is produced by the IPCC, Dr Pachauri added. The IPCC’s main role is to assess the scientific, technical and socio-economic information relevant for understanding the risk of human-induced climate change, Dr Pachauri said, adding that “there is a mistaken impression that study on climate change only involves atmospheric sciences.” “My main aim is to improve the outreach and dissemination of IPCC reports,” he said.

Not beholden to anyone, says Pachauri

By Our Special Correspondent

NEW DELHI, APRIL 22 The Chairman of the Tata Energy Research Institute (TERI), Rajendra K Pachauri, who was recently elected as the Chairman of the Intergovernmental Panel on Climate Change (IPCC), today denied suggestions that he would side with the United States on issues relating to climate change because the US had supported his candidature over that of Robert T. Watson, a US citizen, who was seeking re-election.

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world community and, in particular, to its member-countries. A total of 192 countries are members of the panel. Dr Pachauri, who polled 76 votes as against 49 by Dr Watson, sought to downplay the controversy that surrounded the election. A section of the US media had suggested that the Bush Government was backing Dr Pachauri because his views were more in tune with that of automobile and energy sectors.

Describing the charges as "baseless", Dr Pachauri said that he had great regard for Dr Watson and would work with him. "I was one of the

three Vice-Chairmen of the panel till now, and I had a good equation with Dr Watson. The relationship would continue," he said.

Asked about the Kyoto Protocol, which the US has been refusing to ratify, he said the Protocol was only a small beginning on the issue of reduction of the greenhouse gases. The world had to go far beyond the Protocol, if the problem had to be sorted out.

Steering clear of political agendas and controversies, Dr Pachauri said his priority would be to highlight the socio-economic impact of climate change, which had not got the required attention.

R.K. Pachauri rejects claims of being US yes-man

"I AM not beholden to any single country for my election as chairman of the Intergovernmental Panel on Climate Change (IPCC)," declared R K Pachauri, Director General of Tata Energy Research Institute, here on Monday

He was reacting to reports suggesting that his election had to do with the US support he received, which refused the renomination of the incumbent chairman Robert Watson

Dr Pachauri revealed that there was tremendous pressure that he become co-chairperson after suitable changes were brought about in the institutional framework, but he declined

Dr Pachauri felt that at any later stage if elected co-chairpersons did not see eye to eye the institution would suffer

For the first time a person from a developing country had become the chairman of the IPCC, Dr Pachauri added, thanking all those nations who supported him

HTC, New Delhi



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INDIA April 23, 2002

NEW DELHI - The new chief of the U N.'s climate advisory body said yesterday the United States had not lobbied for his election but environmentalists said Washington had engineered his victory to oust a less acceptable candidate

Indian environmentalist Rajendra Pachauri told reporters support from developing countries had helped him become the chairman of the Intergovernmental Panel on Climate Change, the body which advises governments on long-term climatic variations

"Here is a secret ballot. You think a person from a developing country needs the help of the United States to get the support of the developing world?" Pachauri said

Pachauri said he won support from Asia, Africa, Russia and Central Asian countries. "If the U S endorses me and asks developing countries to vote for me do you think they would really follow the dictates of the U S "

Pachauri beat the incumbent, U S scientist Robert Watson, last week to head the IPCC

Environmentalists said Watson was removed because of a campaign over the post mounted by the United States, which has refused to join the Kyoto Protocol, an international pact to reduce most industrial nations' net emissions of greenhouse gases such as carbon dioxide

Watson, who Pachauri described as a friend, is a strong supporter of the pact which is opposed by major oil companies

GREEN GROUPS SEE RED

Environmentalist group Greenpeace said yesterday the United States, which sought and gained support from Saudi Arabia, other oil-producing states and Japan, was seeking a less forceful advocate to combat climate change

"This has been a long, carefully planned and flawlessly executed strategy by the U S ," Steve Sawyer, climate policy adviser at Greenpeace, said in Amsterdam

"Having the oil industry replace Watson is a kick in the teeth," he said, referring to a leaked memo from an oil company to the U S administration urging Washington to oust Watson

Green campaigners were reluctant to criticise Pachauri, but pointed out that in addition to his position as director of

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the Tata Energy Research Institute, he was also a non-official director of the state-run Indian Oil Corporation

Earlier, the Swiss-based World Wide Fund for Nature expressed concern at what it said was "extensive lobbying" against Watson by President George W Bush's administration

Pachauri said the United States would not influence the decisions and working of the climate panel.

"The views of any one country do not affect us and all decisions are taken by consensus We have 192 countries," he said

Pachauri said he supported the Kyoto pact, but it was just one step in dealing with greenhouse emissions

The Kyoto Protocol calls on countries to reduce emissions of greenhouse gases such as carbon dioxide, which are blamed by many scientists for global warming, to pre-1990 levels by 2012

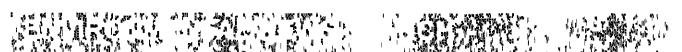
The United States says the pact is flawed and has proposed an alternative strategy which would slow the increase of emissions but not decrease them as called for by Kyoto

"It's a beginning and a very healthy beginning But the world has to do much more and the Kyoto Protocol by itself will certainly not solve the problem of climate change," Pachauri said

Story by Sugita Katyal

REUTERS NEWS SERVICE

REUTERS 



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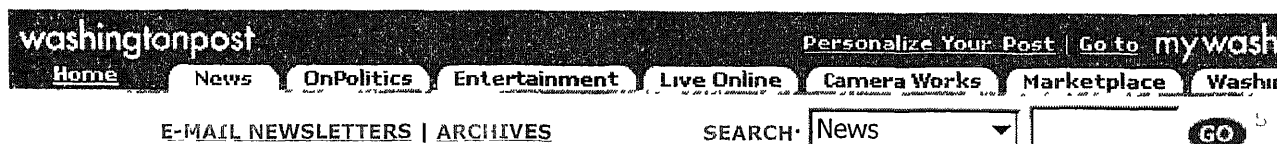
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Site designed by Jon Dee @ Planet Ark



News Home Page

WASHINGTON IN BRIEF

Saturday, April 20, 2002, Page A06

U.S. Scientist Loses Post on Warming Panel

A U.S. scientist who ran afoul of the Bush administration and the oil industry was replaced yesterday as chairman of a United Nations panel on global warming during a reorganization meeting in Geneva.

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On the Web

Robert T. Watson, chief scientist of the World Bank and an atmospheric chemist, was replaced by Rajendra K. Pachauri of India as chairman of the Intergovernmental Panel on Climate Change. Watson's term had expired, and the Bush administration ousted him after a year of intense lobbying by energy industry lobbyists and some officials who have criticized Watson as biased and focused on building a science that justifies cutting the use of coal and oil.

Watson said recently that he was seeking to retain the chairmanship. But the administration announced that it was backing Pachauri, the director of a New energy and environmental consulting group and the vice chairman of the U.N. Pachauri prevailed over Watson, 76 to 49, in secret balloting by member countries.

The panel is closely watched by U.S. energy companies and environmentalists. The worldwide debate over global warming and whether carbon emissions should stem the problem.

Navy Deploys Engineers On Philippine Island

The United States was scheduled to send 340 Navy engineers ashore today to aircraft landing zones on a southern Philippine island stronghold of Muslim radical Qaeda network, the Pentagon said.

The announcement of the deployment to Basilan Island followed the approval by the Philippine government. It will bring to about 1,000 the number of U.S. troops in the country's volatile south, where Manila is fighting Muslim separatist groups and kidnapping gangs.

The counterterrorism exercises on the impoverished island represent the biggest yet in the U.S. war on terror since the rout of the Taliban regime in Afghanistan.

Bush Makes a 'J Turn' With High-Powered Car

President Bush got behind the wheel of a muscle car, dropped it into reverse and executed a sharp escape maneuver during a tour of the Secret Service training center in Beltsville.

Under the watchful eyes of Secret Service experts, according to his spokesman, the president drove a 2002 Chevrolet Camaro down a practice track and spun it 180 degrees at 40 miles per hour, continuing front-end-first in the same direction -- an evasive maneuver known as a "J turn" that Secret Service drivers might make if they came under attack while ferrying dignitaries.

"It's the first time I'll ever admit to making a J turn," Bush told reporters.

-- Compiled from reports by staff writer Eric Pianin, Reuters and the As

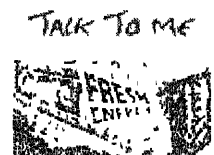
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Tuesday
April 23, 2002
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Back home, IPCC chief says he belongs to the world

Ramesh Menon in New Delhi

The work done by the Intergovernmental Panel on Climate Change will have a greater bearing on the future of the human race and all living species, said Dr R K Pachauri, the newly elected chairman of the IPCC

He was talking to newsmen soon after he returned to India from Geneva after his election for a six-year term

Dr Pachauri said his candidature was backed not only by the United States, but by delegates from Asia, Africa, Russia and Central Asia too

The Indian government played a stellar role in promoting his case, he said

The Ministry of External Affairs and the Ministry of Environment had backed him fully and in September 2001, Prime Minister Atal Bihari Vajpayee cleared his nomination for the chairman's post, he said

Dr Pachauri pointed out that he was under intense pressure to accept the co-chairmanship with Bob Watson but had chosen not to give in and contest the elections

The United States did not put up a candidate. This led to charges that the United States was backing him as they perceived that he would be soft on them. But Pachauri dismissed these charges saying that he had been very critical of American policy in the past

His main priority in his six-year term, he said, would be to ensure that the results of IPCC on climate control would have a greater outreach

"The IPCC strategies formed after looking at worldwide research should reach one and all - industry, media, NGOs and most importantly, the civil society," he said

The IPCC produces and provides scientific evidence on climate change

Dr Pachauri said that though the United States was the largest contributor to the IPCC, it would in no way influence the way the organisation worked

The IPCC must and would retain its credibility as a purely objective scientific institution, he said, without being influenced by any lobby or country

"I am now a stateless person. I do not belong to India alone or represent only the underdeveloped world. I have to take a correct and

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just global view," he said

Dr Pachauri expressed concern about the dangers of Himalayan glaciers receding and the sea level rising which would drown many islands like the Maldives. The IPCC was trying to get a grip on such issues, he said.

He said he would be forced to lay down some commitments at the Tata Energy Research Institute, where he is the director general, because of his new responsibility.

His new honorary assignment would make him spend a lot of time in Geneva and other parts of the world, he said.

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Pachauri defends election as IPCC chief
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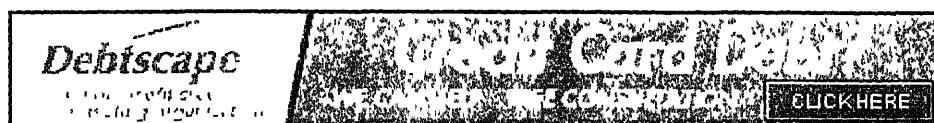
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Small islands could drown, warns climate body chief

Tue Apr 23, 9 28 AM ET

By Sugita Katyal

NEW DELHI (Reuters) - Imagine a world without the Maldives, or the Caribbean islands

According to the new chief of the U N 's climate advisory body small islands are in severe danger of drowning as climate change is expected to raise sea levels

"Small island states will be really badly affected. A lot of them will be submerged -- the Maldivian islands, all those in the South Pacific and the Caribbean islands," Rajendra Pachauri, who was elected chairman of the Intergovernmental Panel on Climate Change (IPCC) last week, told Reuters in an interview on Tuesday

"Japan could suffer difficulty although Japan is not quite as vulnerable as some of the small islands "

For years, the bearded 62-year-old Indian environmentalist has been helping India clean up its act -- pushing renewable sources of fuel in the energy-deficient country

Today, Pachauri -- the head of the Tata Energy Research Institute of India -- has a more formidable job ahead of him

"In the next three, four, maybe five decades we will see the impact of climate change such as sea level rise, impact on agriculture, impact on water, impact on health because there are certain diseases and viruses which could increase," Pachauri said

A study this month by the United Nations ([news - web sites](#)) Environment Programme (UNEP) predicted global warming ([news - web sites](#)) could cause more than 40 Himalayan glacial lakes to burst their banks in five years' time, causing floods and killing thousands of people

Pachauri, a former railway engineer, warned that climate change could have a particularly deep impact on agriculture, a major source of livelihood in many parts of the developing world.

He said wheat, which is highly sensitive to temperature, is in danger as coming climate changes could force temperatures as high as 50 degrees Celsius in some parts of the world.

SOCIAL AND ECONOMIC IMPACT

Pachauri was also concerned about the long-term socio-economic impact on the developing world, as changes in cultivation patterns affects farm incomes

"If people earning a living by growing wheat move to coarse grains would they get the same level of earnings? If they don't, would they move to towns and cities," he said sitting behind his paper-strewn desk in the heart of the Indian capital

Environmentalists say Pachauri, known for his successes brokering environmental arrangements between government and industry, will be under pressure from the United States which they say engineered his election to the post

Pachauri -- who has doctorates in industrial engineering and economics -- beat incumbent U S scientist Robert Watson last week in a secret ballot to become chairman of the IPCC, the body that advises governments on long-term climatic variations.

Environmentalists said Watson was removed because of a campaign by the United States, which has refused to join the Kyoto Protocol ([news](#) - [web sites](#)), an agreement to reduce most industrial nations' net emissions of greenhouse gases such as carbon dioxide

The environmentalist's allegations stem from a leaked White House memo from a major U S oil company urging Watson's re-election be opposed

Watson is a strong supporter of the Kyoto pact, which is opposed by major oil companies The United States says the pact is flawed and expensive, and has proposed an alternative strategy that would slow the increase of emissions but not decrease them

Pachauri denies the United States lobbied for his election and says Washington will not affect the working of the panel

"The IPCC is only a scientific body It doesn't get into the question of commitments by different countries It doesn't concern itself with what country A or country B would do "

Pachauri also dismissed the possibility of pressure from oil companies, saying they did not have a direct role in the IPCC

"All they can do is maybe pressure a few governments here and there "

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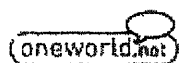
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Environment Groups Decry Climate Panel Choice

Tue Apr 23, 2 13 PM ET

Jim Lobe, [OneWorld US](#)

Environmental groups are protesting a successful effort by the administration of United States President George W. Bush ([news](#) - [web sites](#)) to oust an outspoken atmospheric scientist as chair of the Intergovernmental Panel on Climate Change (IPCC) which has raised the alarm about the link between global warming ([news](#) - [web sites](#)) and the emission of so-called greenhouse gases.



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The scientist, Dr. Robert Watson, was defeated in his bid to serve a second five-year term as head of the 14-year-old international body which includes some 2,500 scientists and experts on global climate change from around the world.

He will be succeeded by the current IPCC vice-chair, Rajendra Pachauri, an Indian engineer and economist who heads the Tata Energy Research Institute in New Delhi. Tata is one of India's biggest think tanks on the energy industry.

Pachauri's candidacy was strongly favored by the administration which, unlike the governments of other industrialized nations, has rejected participation in the Kyoto Protocol ([news](#) - [web sites](#)) which requires industrialized countries to substantially reduce their emissions of greenhouse gases over the next decade.

The Bush administration, which insists that it recognizes global warming to be a problem, says the reductions required by the treaty would severely harm the U.S. economy.

Pachauri defeated Watson, who was strongly supported by European Union ([news](#) - [web sites](#)) countries, in a secret ballot of 125 government representatives in Geneva under the auspices of the United Nations ([news](#) - [web sites](#)) and the World Meteorological Organization ([news](#) - [web sites](#)) which jointly run the IPCC.

Earlier this month, the Natural Resources Defence Council (NRDC) released documents showing that the energy industry, particularly Exxon-Mobil, had been lobbying hard for Watson's removal since Bush took power in January, 2001.

Exxon-Mobil, the world's largest energy company, sent a confidential memo to the White House complaining that Watson was "hand picked by [former Vice President] Al Gore ([news](#) - [web sites](#))". The same memo called on Bush to "restructure U.S. attendance at upcoming IPCC meetings to assure none of the Clinton/Gore proponents are involved in any decisional activities."

"This is just another example of the administration's kowtowing to polluting industries," noted

Mark Helm, a spokesman for Friends of the Earth ([news - web sites](#)) in Washington "Our understanding is that [Pachauri] was their pick "

Greenpeace called Watson's ouster a "tactical" victory for Bush and the industry "The U S has struck another blow in its broad effort to undermine the science of climate change, and to undermine international institutions and international agreements," said Steve Sawyer, Greenpeace International's climate policy advisor

"The cynicism of the U S has reached new heights in this process by pretending that it is acting in the interests of developing countries, who otherwise have received very short shrift from the United States," he added

"I am not a toady of the U S ," Pachauri told *Science* magazine earlier this month "I was very critical of the U S " for opposing Kyoto, he said Referring in the same article to the proposed system for the trading of emissions which fuel climate change, Pachauri added, "Free-market solutions will not work "

Gore also joined the criticism in a column published by the *New York Times* Sunday which charged that Watson had been "blackballed" by ExxonMobil and the "largest polluters" as part of a strategy of "promoting confusion about global warming "

The companies, as well as other interests that are closely tied to the production of fossil fuels, such as Saudi Arabia and other oil-exporting countries, opposed Watson primarily because of his effectiveness in forging consensus positions from the vast scientific community involved in the IPCC and his willingness to speak out

Watson's supporters had argued that his expertise in atmospheric science, as well as his political skills in working with his colleagues from other disciplines made him uniquely appropriate for the job

Under his chairmanship, the IPCC last year concluded that "there is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities "

The panel also predicted that average global temperatures will rise between three and 10 degrees Fahrenheit by the end of this century That conclusion was upheld last year by the U S National Academy of Sciences ([news - web sites](#)) after the White House asked that it make its own assessment

"It's bad enough that ExxonMobil controls White House energy and climate policies," said NRDC's science director, Daniel Lashof, when the documents were first obtained under the Freedom of Information Act "Now they want to control the science, too "

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Pachauri defends election as IPCC chief

Dr Rajendra Pachauri, who was recently elected chairman of the Intergovernmental Panel on Climate Change, on Monday denied Western media reports that he had won the election because he was "pro-Bush administration"

"I am appreciative of the US for support, but I am not beholden to any particular country for my support, which comes from a group that not only supported my candidature, but even fought for it," Dr Pachauri said in New Delhi

"I presume I am well-known in the US and I presume they felt that I was working my support base is Asia, Russia, Central Asia and some Latin American countries," said Dr Pachauri, who defeated Robert T Watson, the incumbent, by a margin of 27 votes

Dr Pachauri, who heads the Tata Energy Research Institute, said there was a strong sentiment that a candidate from a developing nation would lead to more focus on developing countries

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[Indian elected chairman of world climate body](#)

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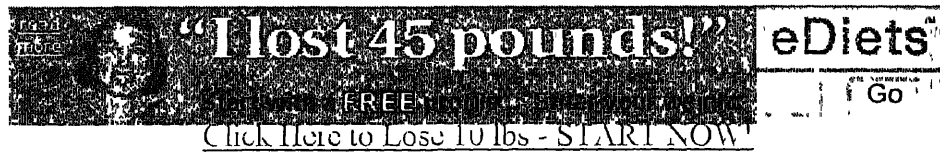
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India - Reuters

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New climate body chief denies U.S. lobbied for him

Mon Apr 22, 11 35 AM ET

NEW DELHI (Reuters) - The new chief of the U N 's climate advisory body denied on Monday that the United States had lobbied for his election over a strong supporter of the Kyoto Protocol ([news](#) - [web sites](#)), and said Washington would not influence the panel

"My support has come from developing countries. It has come from the economies in transition. Here is a secret ballot. You think a person from a developing country needs the help of the United States to get the support of the developing world?" Indian environmentalist Rajendra Pachauri told a news conference.

Pachauri beat the incumbent, U S scientist Robert Watson, last week in a secret ballot to be chairman of the Intergovernmental Panel on Climate Change (IPCC), the body that advises governments on long-term climatic variations.

Environmentalists said Watson was removed because of a campaign by the United States, which has refused to join the Kyoto Protocol, an agreement to reduce most industrial nations' net emissions of greenhouse gases such as carbon dioxide.

Watson, who Pachauri described as a friend, is a strong supporter of the pact which is opposed by major oil companies.

"If the U S endorses me and asks developing countries to vote for me do you think they would really follow the dictates of the U S? My support base has stood firm -- it consists of people from Asia, Africa, Russia and Central Asia," Pachauri said.

GREEN GROUPS SEE RED

The World Wide Fund for Nature (WWF), the Swiss-based environmental protection group, expressed concern at what it said was "extensive lobbying" against Watson by the administration of President George W. Bush ([news](#) - [web sites](#)).

The environmentalist attack followed the leaking of a memo from a major U S oil company urging the White House to oppose Watson's re-election.

Pachauri, the director-general of India's Tata Energy Research Institute, said the United States would not influence the decisions and working of the climate panel.

"The views of any one country do not affect us and all decisions are taken by consensus. We have 192 countries," he said.

"If any single country has a point of view contrary to the rest then, while that point of view will be reflected in the decisions we arrive at, it cannot sway the 191 countries that may have totally different views. I'm not concerned about what the U S might do."

Pachauri said he supported the Kyoto pact, but it was just one step in dealing with greenhouse

emissions

The Kyoto Protocol calls on countries to reduce emissions of greenhouse gases such as carbon dioxide, which are blamed by many scientists for global warming ([news](#) - [web sites](#)), to pre-1990 levels by 2012

The United States says the pact is flawed and expensive, and has proposed an alternative strategy that would slow the increase of emissions but not decrease them

"If you look at the emissions scenario and the impact of the Kyoto Protocol in bringing down the scenario it's merely peanuts. It doesn't really make a major impact in bringing down the emissions," Pachauri said

"It's a beginning and a very healthy beginning. But the world has to do much more and the Kyoto Protocol by itself will certainly not solve the problem of climate change."

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UPDATE 2-New climate body chief denies U.S. lobbied for him[Click Here](#)
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(Adds details, quotes)

By Sugita Katyal

NEW DELHI, April 22 (Reuters) - The new chief of the U N 's climate advisory body said on Monday the United States had not lobbied for his election but environmentalists said Washington had engineered his victory to oust a less acceptable candidate

Indian environmentalist Rajendra Pachauri told reporters support from developing countries had helped him become the chairman of the Intergovernmental Panel on Climate Change, the body which advises governments on long-term climatic variations

"Here is a secret ballot. You think a person from a developing country needs the help of the United States to get the support of the developing world?" Pachauri said.

Pachauri said he won support from Asia, Africa, Russia and Central Asian countries "If the U S endorses me and asks developing countries to vote for me do you think they would really follow the dictates of the U.S."

Pachauri beat the incumbent, U.S. scientist Robert Watson, last week to head the IPCC

Environmentalists said Watson was removed because of a campaign over the post mounted by the United States, which has refused to join the Kyoto Protocol, an international pact to reduce most industrial nations' net emissions of greenhouse gases such as carbon dioxide.

Watson, who Pachauri described as a friend, is a strong supporter of the pact which is opposed by major oil companies.

GREEN GROUPS SEE RED

Environmentalist group Greenpeace said on Monday the United States, which sought and gained support from Saudi

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United States, which sought and gained support from Saudi Arabia, other oil-producing states and Japan, was seeking a less forceful advocate to combat climate change.

"This has been a long, carefully planned and flawlessly executed strategy by the U.S.," Steve Sawyer, climate policy adviser at Greenpeace, said in Amsterdam.

"Having the oil industry replace Watson is a kick in the teeth," he said, referring to a leaked memo from an oil company to the U.S. administration urging Washington to oust Watson.

Green campaigners were reluctant to criticise Pachauri, but pointed out that in addition to his position as director of the Tata Energy Research Institute, he was also a non-official director of the state-run Indian Oil Corporation [IOC](#).

Earlier, the Swiss-based World Wide Fund for Nature expressed concern at what it said was "extensive lobbying" against Watson by President George W. Bush's administration.

Pachauri said the United States would not influence the decisions and working of the climate panel.

"The views of any one country do not affect us and all decisions are taken by consensus. We have 192 countries," he said.

Pachauri said he supported the Kyoto pact, but it was just one step in dealing with greenhouse emissions.

The Kyoto Protocol calls on countries to reduce emissions of greenhouse gases such as carbon dioxide, which are blamed by many scientists for global warming, to pre-1990 levels by 2012.

The United States says the pact is flawed and has proposed an alternative strategy which would slow the increase of emissions but not decrease them as called for by Kyoto.

"It's a beginning and a very healthy beginning. But the world has to do much more and the Kyoto Protocol by itself will certainly not solve the problem of climate change," Pachauri said.

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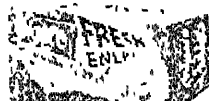
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Indian elected chairman of world climate body

R K Pachauri was on Friday elected as chairman of an Inter-Governmental Panel on Climate Change

In a keenly contested election in Geneva, Pachauri defeated the incumbent, B Watson of New Zealand, by 76 votes to 49. The third candidate, Golden Berg of Brazil, secured seven votes.

Pachauri, the Director of Tata Energy Research Institute, is considered one of the leading experts on environment in the world.

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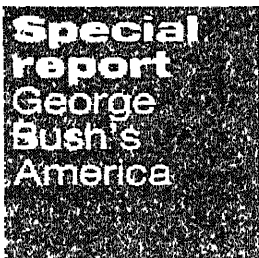
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US and oil lobby oust climate change scientist

Julian Borger in Washington
Saturday April 20, 2002
[The Guardian](#)

The head of the international scientific panel on climate change, which has called for urgent action to curb global warming, was deposed yesterday after a campaign by the Bush administration, Exxon-Mobil and other energy companies to get him replaced

At a plenary session of the Intergovernmental Panel on Climate Change (IPCC) in Geneva, Robert Watson, a British-born US atmospheric scientist who has been its chairman since 1996, was replaced by an Indian railway engineer and environmentalist, R K Pachauri

Dr Pachauri received 76 votes to Dr Watson's 49 after a behind-the-scenes diplomatic campaign by the US to persuade developing countries to vote against Dr Watson, according to diplomats. The British delegation argued for Dr Watson and Dr Pachauri to share the chairmanship

The US campaign came to light after the disclosure of a confidential memorandum from the world's biggest oil company, Exxon-Mobil, to the White House, proposing a strategy for his removal

This included the removal of President Bill Clinton's appointees on the US delegation, and their replacement by officials more sympathetic to the needs of industry

Steve Sawyer, a Greenpeace climate change specialist, said "Even the most cynical would be shocked by the heavy-handed tactics of the US delegation's bald display of their fossil fuel-backed politics"

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Diplomats in Washington confirmed that the US had pursued an active campaign against Dr Watson

Although he comes from an industrial background, Dr Pachauri is one of India's leading environmentalists and has supported implementation of the Kyoto treaty on global warming - a treaty the Bush administration has rejected

Environmentalists argued that the anti-Watson campaign was a show of strength by the US, oil producers like Saudi Arabia, and oil corporations like Exxon-Mobil, intended to cow the IPCC

However, the head of the US delegation to the IPCC, Harlan Watson, denied claims of a vendetta and said that Dr Pachauri was both well qualified and the first strong candidate put forward by the developing world

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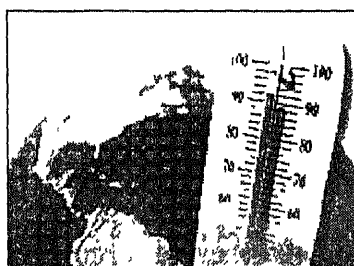
INTERACTIVE



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U.S. Scientist Booted Off Climate Panel

GENEVA, April 19, 2002



(CBS/AP)

"The Bush administration and its friends would rather shoot the messenger than listen to the message."

Kate Hampton,
Friends of the Earth

(AP) A U.S. scientist was voted off an international climate panel Friday after what campaigners claimed was pressure from the oil industry and Washington, a claim rejected by the United States.

Atmospheric scientist Robert Watson was seeking re-election as head of the Intergovernmental Panel on Climate Change. He has been vocal in warning governments about the danger of fossil fuel emissions contributing to global warming.

Watson was defeated by Indian challenger Rajendra Pachauri, who was backed by the United States and 75 other nations.

Watson received 49 votes in the ballot, said World Meteorological Organization spokeswoman Mo Lagarde.

Seven nations voted for Jose Goldemberg, a Brazilian who entered the race this week.

The panel, set up in 1988 by the World Meteorological Organization and the U.N. Environment Program, assesses and publicizes information on man-made climate change.

Environmental groups have accused the Bush administration of caving in to a request from Exxon Mobil that it try to remove Watson.

"The fossil fuel industry and the U.S. government will be celebrating their success in kicking out Bob Watson, an experienced scientist who understood that urgent action is needed to tackle global climate change," said Kate Hampton, international climate coordinator for British-based Friends of the Earth.

Discover more about global warming and what the international community is doing as the issue heats up.

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"The Bush administration and its friends would rather shoot the messenger than listen to the message," Hampton said in a statement.

The Swiss-based Worldwide Fund for Nature said it was worried by the "apparent politicization" of the Intergovernmental Panel on Climate Change.

"WWF is concerned that oil and gas interests had too much to say in the removal of Dr. Watson as chairman of what should be an impartial, scientific body," said Jennifer Morgan, director of WWF's climate program.

Harlan Watson, who headed the U.S. delegation in Geneva, told The Associated Press he "wouldn't give any weight to some kind of a campaign."

"The United States was just one of 76 countries that voted for Pachauri," he said. "We weren't against Dr. Watson. We were for Dr. Pachauri, who is an eminently qualified individual having previously served as vice chairman of the climate panel."

"For the first time, the developing countries brought forward a very strong candidate and we felt it was time for them to be given a chance," he said.

Two weeks ago, the Natural Resources Defense Council, a Washington, D.C.-based environmental group, said the White House's Council on Environmental Quality received a memo from Exxon Mobil in February 2001 that asked, "Can Watson be replaced now, at the request of the U.S.?"

The memo, which the group said it obtained through the Freedom of Information Act, also recommended the administration "restructure the U.S. attendance at upcoming IPCC meetings to assure none of the Clinton/Gore proponents are involved in any decisional activities."

Watson has been an outspoken proponent of the idea that fossil fuel emissions contribute to rising global temperatures. He has led the panel since 1996 and is also the chief scientist of the World Bank.

Pachauri is an engineer and an economist and is the director of the Tata Energy Research Institute in New Delhi, India.

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Frontline

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EVENTS

The Sustainable Development Summit 2002 held in Delhi draws the world's attention to poverty alleviation as the means to a sustainable future.

R. RAMACHANDRAN

THE best definition of the phrase 'sustainable development' perhaps is the one arrived at by the Brundtland Commission set up by the United Nations in 1987 as "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs." In 1992, the U N Conference on Environment and Development (UNCED) in Rio de Janeiro, the Earth Summit, called for sustainable development "to ensure socially responsible economic development while protecting the resource base and the environment for the benefit of future generations" Ten years down the line, as the 21st century confronts the world, it is time to take stock of progress in achieving that goal The UN World Summit on Sustainable Development (WSSD), scheduled to take place in Johannesburg between August 26 and September 4, is aimed to do that as well as to evolve workable solutions to move ahead

BY SPECIAL ARRANGEMENT

Prime Minister Atal Behari Vajpayee releases a booklet, "Defining an Integrated Energy Strategy for India", by presenting a copy to Union Minister for Environment and Forests T.R. Baalu at the inauguration of the Sustainable Development Summit 2002. Also in the picture are Tata Energy Research Institute Director R.K. Pachauri and Dutch Minister for Housing, Spatial Planning and



Environment Jan Pronk, who is also the Chairman of the Seventh Conference of Parties.

What had been initiated at the 1972 Stockholm U N Conference on the Human Environment culminated in Rio with the global realisation that environmental protection and natural resource management must be integrated with socio-economic issues The Rio Summit was a landmark event that brought together governments including more than 100 heads of state, international agencies and non-governmental organisations(NGOs), where the international community committed itself to secure economic well-being, social development and environmental stability - the three pillars that the world had come to realise need to be concurrently addressed if sustainable development is to be achieved Ignoring any one of these, negates the achievements with regard to the other two

The future agenda for sustainable development was clearly defined at the conclusion of the Rio Summit when the assembled leaders signed the Framework Convention on Climate Change (FCCC) and the Convention on

Biological Diversity (CBD), endorsed the Rio Declaration on Environment and Development and the Forest Principles, and adopted Agenda 21, a 300-page plan for achieving sustainable development in the 21st century. Agenda-21 constitutes the centrepiece of the Rio Summit.

As a follow-up, the Commission on Sustainable Development (CSD) was created in December 1992 under the UN Economic and Social Council (ECOSOC) in order to ensure the effective implementation - at the local, national, regional and international levels - of what had been agreed upon at UNCED. The five-year review of the progress of the Earth Summit by a special session of the UN General Assembly (UNGA) - called Earth Summit + 5 - held in June 1997 adopted a comprehensive document titled 'Programme for the Further Implementation of Agenda 21' prepared by the CSD. It also adopted the programme of work of the Commission for 1998-2002.

Year 2002, or Rio + 10, is upon us and Agenda 21 is up for its second five-year review. The WSSD, being held under the auspices of the CSD, will be the forum where progress on Agenda-21 will be reviewed and decisions taken with regard to its implementation in the 21st century. WSSD will also evolve measures to implement the developmental goals of the Millennium Declaration adopted at the Millennium Summit held in New York in September 2000, which included the following resolve of the world leaders: "We reaffirm our support for the principles of sustainable development, including those set out in Agenda 21, agreed upon at the UNCED." These Millennium Development Goals (MDG) supplement the objectives set forth in Agenda 21.

Such a reiteration of the Rio objectives has become necessary as, despite the global consensus and political commitment of nation-states to a future of sustainable development, progress towards the established goals has been tardy and in some respects the conditions are worse than they were a decade ago. Indeed, in one of the Millennium Summit preparatory sessions of the General Assembly, UN Secretary-General Kofi Annan expressed surprise at the limited discussions on the subject of sustainable development and remarked that "so little priority is accorded to these extraordinarily serious challenges for all humankind." This reaffirmation notwithstanding, the US rejection of the Kyoto Protocol on climate change was a significant pointer to the growing concern that the developed countries are yet to demonstrate their full commitment to end their unsustainable ways of living.

In his comprehensive report "Implementing Agenda-21" presented at the conclusion of the Second meeting of the Preparatory Committee (PrepCom) for the WSSD held in New York between January 28 and February 8, Kofi Annan identified four broad areas where "gaps in implementation were particularly visible":

- * A fragmented approach towards sustainable development. Policies and programmes at both national and international levels do not reflect the inextricable connections between economic, social and environmental objectives,
- * No discernible changes in the unsustainable consumption and production patterns, which are putting the natural life-support system at peril,
- * Lack of mutually coherent policies or approaches in the areas of finance, trade, investment, technology and sustainable development, particularly in the context of a globalising world,
- * The financial resources required for implementing Agenda-21 have not been forthcoming and mechanisms for transfer of technology have not improved.

In the run-up to the Johannesburg Summit, besides the PrepComs of the CSD (of which two more will be held in March-April and May-June), several national, regional and international conferences are being held to identify the issues that will go to supplement the official WSSD agenda arrived at by the CSD. One such important international meeting was the one organised in New Delhi between February 8 and 11 by the Tata Energy Research Institute (TERI), a research-oriented non-governmental organisation with its headquarters in New Delhi. Called the Delhi Sustainable Development Summit 2002 (DSDS 2002) (the second in TERI's sustainable development summit series), the conference was titled "Ensuring Sustainable Livelihoods: challenges for governments, corporates and civil society at Rio + 10".

THE meeting brought together eminent personalities from India and abroad concerned with issues related to sustainable development, most notably Jan Pronk, the Special Envoy appointed by Kofi Annan to the WSSD. Pronk, currently the Dutch Minister for Housing, Spatial Planning and Environment, is also the Chairman of the Seventh Conference of the Parties (COP) to the Kyoto Protocol scheduled for November 2002 and the prime force behind the Protocol's final text and its adoption. It is learnt that one of the prime objectives of Pronk's visit to India was to extend a personal invitation to Prime Minister Atal Behari Vajpayee to attend the Johannesburg Summit. "If the Summit is to be called a Summit, heads of state and heads of governments must make every effort to participate and for the summit to be a global summit, no country should be absent so that a globally agreeable agenda must be negotiated," Pronk remarked in his statement read out at the inaugural of the conference as commitments back home prevented him from reaching the meet in time.

Pronk wished to emphasise the fact that, though Johannesburg is the follow-up to Rio, it is not a conference on environment, but on sustainable development, including economics, social affairs and the environment. "Too few people realise that even today," he said. "In Johannesburg, apart from focussing on what went well and what went wrong, we will have to decide on those aspects of Rio that have been forgotten and simultaneously there is a need to look forward. There are trends that were not prominent ten years ago that need to be included today - the impact of globalisation, new technologies in biotechnology and information and communication, new violence such as new types of wars and terrorism," he added. "Rather than issuing a list of recommendations, Johannesburg must reach concrete decisions," Pronk stressed.

Pronk emphasised the fact that the question of access to technology needed to be addressed more pointedly. In fact, at the press briefing, Pronk lamented the fact that this aspect did not receive sufficient attention even at the Delhi Summit. "In the past, we paid lip service to this promise, but the finance was always lacking. We need agreement on finance for technology access as well as agreements on more lenient regulations in order to facilitate access to poor countries," Pronk observed.

The summit background report circulated by TERI reflected the fact that, in the lead-up to the WSSD, the UN and other international development agencies shifted their focus to targeting poverty alleviation as the overriding concern to achieve sustainable development. The path followed until now by governments and international institutions, giving priority to economic growth, has given way to a realisation that this does not necessarily bring about sustainable development, the alleviation of poverty in particular. Every PrepCom meeting has voiced the concern that the core developmental issues of eradicating poverty and meeting basic human needs remain the prime challenge in the developing countries and unless the needs of the weakest are put first, all efforts to preserve the environment or promote sustainable development would prove self-defeating.

The TERI background report quoted the observation by the World Commission on Environment and Development (WCED) "A world in which poverty and inequity are endemic will always be prone to ecological and other crises" According to it, 20 per cent of global population, living in high-income countries, accounted for as much as 86 per cent of the total private consumption expenditure, and the share of the poorest 20 per cent was only 1.3 per cent. The report said that there was a decline in overall poverty rate in the developing countries, from 29 per cent in 1990 to 23 per cent in 1998 (based on poverty line of \$1 per day) and the absolute number of poor declined from 1.3 billion to 1.2 billion. While much of this improvement was concentrated in East and Southeast Asia, with some progress in South Asia and Latin America, there was no progress in sub-Saharan Africa where almost half the population lived in poverty.

"Poverty alleviation measures," the report said, "have traditionally focussed on enhancing per capita income and consumption at the national level, as also manipulating sectoral policies to direct subsidies to the poor. These approaches did not pay adequate heed to the milieu, within which the poor exist and resources they use for generating a livelihood. Poverty eradication in the long run requires the poor to sustain enhanced standards of living through promotion of opportunity, empowerment and security, which in essence lays the foundation of the sustainable livelihood approach. Sustainable livelihood opportunities are shaped not only by local or endogenous factors but also seemingly exogenous factors such as economic and social integration of the nations of the world." The report called for reinvigorating the promises made at Rio regarding resources, technology, capacity-building and market access.

CRITICISING the developed world for not fulfilling the "lesser obligation" of just one-third of the financial resources required to implement Agenda-21, Prime Minister Vajpayee in his inaugural address said "Clearly, they must give more resources, directly through higher aid and indirectly by opening their markets to poorer nations. Therefore, imposing environmental or labour restrictions on free movement of goods and services, in the name of selective aspects of sustainable development, will only intensify poverty in the developing world."

Vajpayee made some proposals for raising resources by using the instruments of sustainable development and globalisation innovatively. He proposed special multilateral levies on global natural resources used by rich countries such as the electromagnetic spectrum or marine fisheries. He also suggested a levy on capital transactions across industrialised countries and capital repatriations from developing countries for several specific poverty alleviation initiatives. "We need to make both sustainable development and globalisation work for the poor. We cannot make the poor and the deprived wait any longer in their aspiration to live a better life. This is the first and foremost task in sustainable development," the Prime Minister added. He urged the summit to present the issues on the agenda for Johannesburg in as clear and unambiguous terms as possible.

The summit was to result in a 'Delhi Declaration' and a report on the conference was to be presented to the CSD for consideration at Johannesburg. For some unstated reason, the much-touted declaration has not been issued yet and the report is yet to be finalised.

The summit's deliberations were organised into 10 thematic sessions. For the poor, the session on ensuring sustainable livelihoods observed, globalisation was both an opportunity and a threat. On the upside, globalisation could make economic activities and institutions more efficient, develop human capital, enhance employment opportunities, provide access to cleaner and more efficient technologies, promote environmental awareness and create

market self-regulation of industrial activities. On the down side, the exacerbation of inequities in the distribution of benefits among world's population had been an impediment to sustainable livelihoods.

The session also expressed concern on the rapid changes in lifestyles and cultural upheaval that it has led to in developing countries. The developed countries, on the other hand, had selectively tapped trained human resources from the developing countries, noticeably in the fields of health, education and information technology, often resulting in exploitation of assets with no returns to the source countries. While Agenda-21 had underscored the importance of such issues, and they had been reiterated at various forums, they were yet to find effective expression in national strategies for development or in bilateral and multilateral commitments.

Rio had held out the promise of 'new and additional' financial resources for sustainable development, to the tune of \$600 billion to implement Agenda 21. On the contrary, the session on financing noted, Official Development Assistance (ODA) flows had declined significantly over the past 10 years. Domestic and foreign private capital had proved inadequate in engendering sustainable development. Further, domestic action towards correcting market and policy failures and making more efficient use of available resources left much to be desired.

The meeting called for not only an increase in the quantum of financial resources - ODA, FDI and domestic - but also more effective use of available resources. It also called for major increases in the funding levels for the Global Environmental Facility (GEF). The session observed that financing a larger number of smaller projects may be more successful than a few large projects in using available resources to ameliorate poverty. The International Conference on Financing and Development to be held in March in Monterrey, Mexico, is expected to discuss ways and means to promote coherence and consistency in the global financing system.

The session underscored the need to restructure financial services to serve the poor better. Citing the example of the Grameen Bank in Bangladesh, it said that monetary systems needed to design special instruments to attract microsavings of the poor into the corporate sector, particularly where these can be structured to serve the poor. The session noted that the Clean Development Mechanism (CDM) introduced under the Kyoto Protocol offered opportunities to tap private capital for sustainable development activities while at the same time providing access to technology to developing countries and enabling industrialised countries to meet their commitments to reduce green house gas emissions flexibly and effectively.

"Since everyone is a potential stakeholder, the Johannesburg Summit will need to strengthen the mechanism for involving all stakeholders, especially the vulnerable groups, in decision making. At the discussion on 'engaging stakeholders', it was observed that the business community should be recognised as an important stakeholder in the pursuit of sustainable development.

The Delhi Summit has come out with a list of recommendations that will presumably form part of the report to be submitted to the WSSD. If there is one common thread that runs through the rich fabric of the proceedings, it is the resolve to go beyond deliberations and focus on determined action.

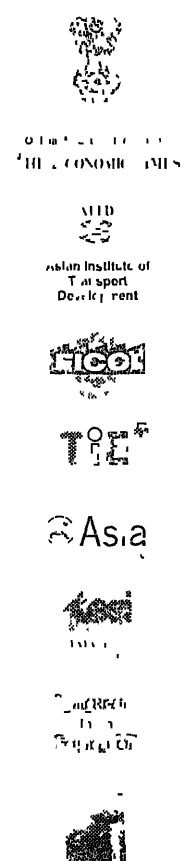
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The Organisers of Invest India – New York 2002, invite you to an evening with
The Honorable William J. Clinton,
42nd President of the United States
 on Thursday May 16th 2002

The Organisers and Supporting Organisations of Invest India have decided to announce the Honorable William J. Clinton, 42nd President of the United States, as the Guest of Honour and Keynote Speaker at the Official Banquet Bandhu to be held at The Brooklyn Museum of Art, New York City.

This prestigious benefit occasion is the growing relationship between India and the United States of America. It also represents a wonderful opportunity to network and lead a political and business delegation to India. The US Indian and the Indian business communities will meet and sign on the occasion.

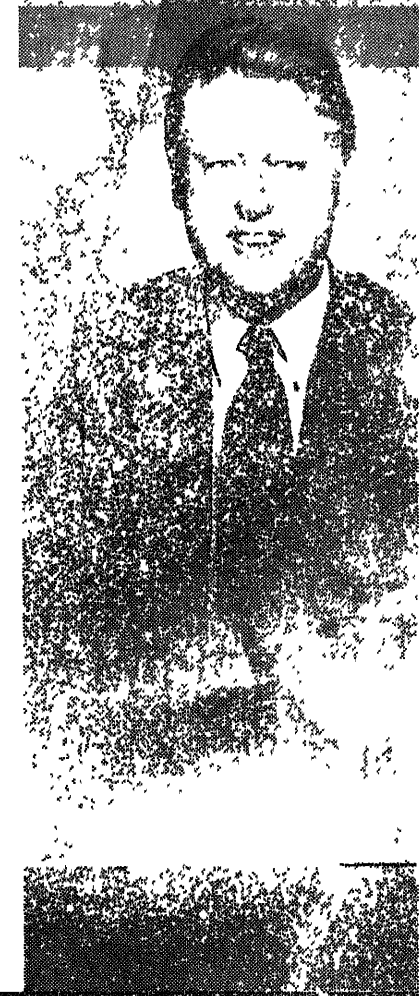
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A Climate Change In The Offing With Pachauri In Hot Seat

PARUL MALHOTRA

New Delhi, April 20

Executive Director for the developing world, the United Nations Environment Programme (UNEP) and the Intergovernmental Panel on Climate Change (IPCC), Rajendra K Pachauri, emerged the winner in a three-way electoral battle fought in Geneva on Friday.

The director-general of Tata Energy Research Institute, an economist and engineer, member of the Prime Minister's economic advisory council, author of 21 books, and former advisor to the United Nations Development Programme in the fields of energy and sustainable management of natural resources, Dr Pachauri defeated the incumbent Robert Watson and Jose Goldemberg by capturing 76 votes out of the 132 on offer. Mr Watson and Mr Goldemberg settled for 49 and seven votes respectively.

The IPCC panel was set up in 1988 by the World Meteorological Organisation and the United Nations Environment Programme to assess and publicise scientific, technical and socio-economic information on man-induced climate changes. As a scientific body, with no role to play in the political process governing the climate change discussions, the IPCC's mandate is to assess scientific literature on global climate changes and to suggest remedial measures to the world community.

Reacting to Dr Pachauri's election, Pradipto Ghosh, an official in the PMO and former head of the energy and climate change division in the Asian Development Bank, said, "The government is very happy with the outcome. He is an outstanding candidate and will be able to enhance the already considerable contribution of developing countries



Rajendra K Pachauri

to the IPCC."

Dr Pachauri's election has another significance. Since the new IPCC chief represents a developing country, many within the scientific establishment expect that the scientific consensus emerging from the IPCC would now greatly reflect research works coming out of the developing countries, besides highlighting the works on the South's developmental and equity concerns. Consequently, it is hoped that the subsequent political negotiation processes will reflect the needs of the Third World as well as the industrialised ones.

Having said that, Dr Pachauri faces constraints and challenges during his six-year tenure, some of which may well serve to temper the optimism generated. There will be compulsions to be impartial towards both the industrialised and the developing world, given the fact the IPCC is strictly a non-political forum. How much will he really be able to influence the IPCC to reflect the developing countries' positions, especially when he is committed to practicing "policy-relevant research and not policy-prescriptive research" remains to be seen. Furthermore, his personal credibility, which has been attacked by the green lobby, which accuses him of having ties with the Bush administration, will also be a challenge.

Continued on Page 10

A Climate Change In The Offing

Continued from Page 1

Only last year did the US fail to ratify the 1997 Kyoto Protocol which required Washington to cut its greenhouse gas emissions from 1990 levels by 7 per cent during 2008-12. The Protocol was the only political instrument from IPCC so far. Given the US support for Dr Pachauri's candidature, instead of Mr Watson's, who has been a vocal critic of the US' withdrawal from Kyoto, sceptics wonder whether IPCC's reports will now be less stringent and demanding. Others level (unsubstantiated) allegations that Dr Pachauri has received the backing of a powerful American oil lobby.

Will Dr Pachauri need to be overly considerate of American interests, given that he got the votes of 75 other nations apart from the US, and that the US has withdrawn from Kyoto? More important, will Dr Pachauri's reluctance

to criticise the US administration's position on climate changes, while possibly facilitating efforts for an amended version of the Protocol more amenable to developing countries and the US, may well strengthen the IPCC itself. For many have privately worried about the political direction the IPCC has taken under Mr Watson's tenure. That Dr Pachauri has extensive experience in areas of environment protection and sustainable development, is an economist (and therefore can be expected to appreciate the role of a competitive market in creating environmentally-sustainable energy policies), and is convinced about the notion of differentiated responsibilities of the developed and developing world on climate change (at least in the short-term) can only augur well for India, the rest of the South and the IPCC. ♦

TERI celebrates Earth Day in schools

By Our Staff Reporter

NEW DELHI, APRIL 20. To further involve students in protecting the city's environment, Tata Energy Research Institute (TERI) has given a forward thrust to its schools awareness campaign this year by holding the "Earth Day" celebrations in various schools across the Capital rather than in its own premises.

"This is the first time that we are going to the schools for celebrating Earth Day, rather than the schools coming over to our premises. We had a painting competition for younger children in Sanskriti school on Thursday which was attended by more than 25 schools. After the competition, teachers and students were given an opportunity to present the work done by their school in the field," said a TERI spokesperson.

"TERI has striven to assign Earth Day a prime position in India's environmental calendar and celebrate it with grand enthusiasm every year. Students enjoy a special status in this effort," the spokesperson added.

Through its annual "Terra Quiz" and "Green Olympiad", TERI has, over the years, been able to build a successful interface with the student community.

The Green Olympiad is an

annual environment contest for school children that aims to whet the spirit of enquiry and this year, the national competition will be held later this September. As for the "Terra Quiz", it has become another

popular event in Delhi schools.

But it is TERI's ongoing "Community Adoption and Monitoring Programme" for schools that has helped conserve and manage urban environment through monitoring, information dissemination, awareness generation, and participation of students, teachers and local communities.

Students in various schools across the Capital motivated concerned civic agencies to maintain the dustbins in their neighbourhood as part of the CAMP programme.

"It might sound very simple but students met NDMC and MCD officials in this regard and lobbied with them to maintain dustbins. Through this process, they themselves became advocates of a clean environment in their respect.

As part of the Earth Day celebrations last year, TERI installed the air pollution monitoring board at the Puthviraj Road Crossing displaying data from 10 air monitoring stations, thus constantly updating public information on the state of Delhi's air quality.

Pachauri romps home with US support

S Rajagopalan

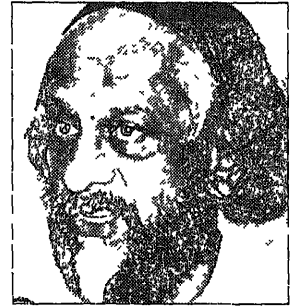
Washington, April 20

THANKS TO vigorous backing by the United States, Indian nominee Rajendra K Pachauri has been elected chairman of the UN panel on climate change. Pachauri, who is director-general of the Tata Energy Research Institute, defeated American scientist Robert Watson (76 to 49 votes).

The Bush administration supported Pachauri's candidature as it wanted to spike the chances of Watson, who was seeking re-election to the post. A top scientist with the World Bank, Watson had won the previous election as a nominee of the Clinton administration.

But that was not his only disqualification. Watson had differences with the Bush administration on the global warming issue.

Media reports here have suggested that the Watson ouster followed pressure



R.K. Pachauri
Climate change

from the American oil and automobile industry. The industry, however, has rejected the contention.

The controversy, however, does not lower the significance of Pachauri's election.

The US delegation dismissed the charge of Watson's ouster. "We weren't against Dr Watson. We were for Dr Pachauri, who is an eminently qualified individual," delegation leader Harlan Watson said.

TERI chief on climate change panel

NEW DELHI Dr R K Pachauri has been elected as Chairman of the Inter Governmental Panel on Climate Change (IPCC) in Geneva. Dr Pachauri is at present Director-General with the Tata Energy Research Institute (TERI). According to a communique, this was the first time that an expert has been elected from a developing country to head the panel.

Executive Briefing

RK Pachauri Elected
Chairperson of UN
Climate Body

Dr RK Pachauri, director-general, Tata Energy Research Institute, has been elected as the chairperson of the inter-governmental committee on climate change

Teri's Pachauri chief of UN climate panel

Geneva: Tata Energy Research Institute director-general R.K. Pachauri was on Tuesday named the next head of the Intergovernmental Panel on Climate Change, defeating US scientist Robert Watson, who was seeking re-election.

Mr Pachauri defeated Mr Watson 76-49 in a secret ballot. A Brazilian, Jose Goldemberg, got seven votes (AP)

R K Pachauri

LONDON, April 19 — In a keenly contested election, India today won a resounding victory for the post of chairman of Inter-Governmental Panel on Climate Change. In the election held in Geneva, India's nominee Dr R K Pachauri, director of Tata Energy Research Institute, defeated the incumbent chairman Bob Watson of New Zealand by 76 votes to 49 votes — PTI

LOCAL

Baisakhi pledge to save Jamuna

STATESMAN NEWS SERVICE

NEW DELHI, April 13 — Water in the Jamuna has very low biological oxygen and the turbidity is much higher. Scientists have already pointed out that this water can be dangerous if used for drinking purposes.

This was shown today to the public at a *Baisakhi mela* in Majnu Ka Tila on the banks of Jamuna by a water-monitoring kit. It was done in order to let people see for themselves the level of contamination in Jamuna water as a part of the public participation and public awareness programme under the Jamuna Action plan.

The reason is — "Everyday lakhs of people use the Jamuna as an open toilet, half burnt dead bodies and carcasses are dumped into the river, the city's laundry is washed in its unclean water, it is used as bathing ghat for

cattle, all through the day, 17 open drains dump the city's waste into the river. It all must be stopped to revive the Jamuna," said Ms Shalini of Tata Energy Research Institute conducting the test to show the public the level of pollution in the river.

The test was conducted on one litre of pure drinking water and the same amount of water taken out from the Jamuna as a sample in a glass. The drinking water

was visible through the glass while the river water sample was non-transparent. The test showed less amount of biological oxygen and non-transparency into the Jamuna water sample. The test al-

source of water for the Capital," said Ms Shalini. To help the river survive, the Jamuna Action Plan was begun in 1993 with financial aid from the Japan government. The plan involves nine

so showed the presence of dissolved oxygen, residual chlorine, nitrate, fluoride, phosphorous, iron, hardness and faecal pollution in the water. And it all showed how harmful it is to use the Jamuna water in its present state. "You can imagine what kind of efforts are put in to make the water usable as it is the only

schemes categorised in sewerage and non-sewerage components. It includes interception and drainage treatment plants, low cost sanitation, crematorium and bathing ghat. In the first phase, the MCD is constructing community toilet complexes to end open defecation. It is also putting sewage treatment plants and constructing modern electric crematoriums.

The municipal corporation has taken the service of various agencies with voluntary organisation ACORD as apex body to create public awareness in the Capital. "The ACORD has drawn plan to involve religious social bodies of the Capital. This was the part of that programme. Similar awareness campaigns will be launched during the coming *Nataratra*," said Ms Shobha Misra, the project manager.



Volunteers from Asian Centre for Organisation Research and Development discussing Jamuna Action Plan near Majnu Ka Tila on the occasion of Baisakhi in the Capital on Saturday — The Statesman

CNG: looking beyond Delhi

By Mukund Padmanabhan

A study published by the Tata Energy Research Institute (TERI) a few months ago concluded that the data does not support the conclusion that Delhi's air quality has improved because some buses, taxis and three-wheelers converted to CNG. As the study points out, the relationship between air quality and vehicular pollution is complex and requires much more probing.

Another study conducted recently by a national-level research institute suggests that improvements in the technology of cars could have contributed significantly to reduction in pollutants. A survey conducted on the composition of traffic suggested that petrol vehicles, depending on the area, account for between 66 per cent and 78 per cent of the total vehicular traffic.

While the percentage of CNG autos on the road is high (suggesting that most have converted), the survey points to the increasing number of newly manufactured cars on the road. Of the so-called new brand cars (NBC), over 20 per cent were of either 2001 or 2002 vintage. The composition of the two-wheeler segment also reflected the predominance of newer machines, reflecting a sizeable rise in the numbers of motorcycles with four-stroke engines.

If the CNG versus diesel debate was limited

to Delhi, it would only be a matter of time before the controversy petered out. The differences between the Delhi administration and the Court relate only to buses and to the speed with which conversions to CNG should be made.

But the Supreme Court order makes it clear that its advocacy of CNG will not stop there. One of its directives reads "The Union of India will give priority to the transport sector, including private vehicles all over India with regard to the allocation of CNG. This means that first the transport sector in Delhi, and in other air polluted

TRANSPORT TRAUMA - II

cities of India, CNG will be allocated and made available and it is only thereafter if any CNG is available that the same can be allocated to the industries."

In order to implement this directive, the Centre has been ordered to prepare a scheme with a time schedule for the supply of CNG by May 9 to "the other polluted cities of India." It is not clear from the order exactly as to which are the other polluted cities, but it is possible that the nine cities in which air quality is "critical" are being referred to, according to the Central Pollution Control Board, are Agra, Lucknow, Jharia, Kanpur, Varanasi, Faridabad, Patna, Jodhpur and Pune.

A number of these cities lie nowhere near

the HBJ pipeline and it boggles the mind how any Government can prepare a feasible plan of supplying CNG to them. Moreover, the polluted air in places such as Jharia have little to do with vehicular emissions and is largely due to the coal mining industry.

It is one thing to introduce CNG in Delhi (even this, as we have seen, takes some doing), but something else altogether to presume that this can be replicated in other places — particularly those which are inland and are nowhere near the existing pipeline. It would appear that the Court has not appreciated a simple truth: Delhi is not India.

The issues involved here go well beyond the undoubted cleanliness of CNG as an automobile fuel, the advantages it provides in leapfrogging directly to Euro IV standards and its immunity against adulteration — a serious problem with diesel and petrol.

At the most immediate level, they concern the feasibility (or really the lack of it) of introducing CNG as more than a major transport fuel in different parts of the country. At a more abstract level, the order raises questions about the country's auto and fuel policies. Who should determine them? The Government or the Court?

(Concluded)

11 APR 2002

Technological advances



THE Government of India set up the Department of Biotechnology in 1986, giving the field a much needed impetus.

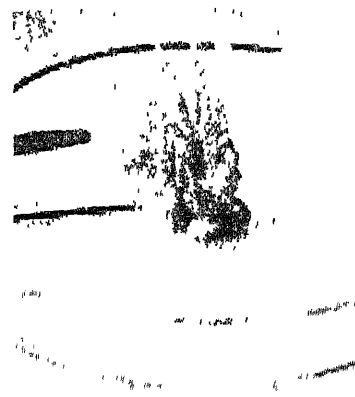
Today, biotechnology is the next best career option, after Information and Technology. Taking cue from the soaring popularity graph, Mumbai University has decided to offer a Bachelor's degree in the subject.

For the uninitiated, biotechnology is a science that uses substances derived from living organisms to make or modify a product, thereby improving the genetic makeup of plants, animals or micro-organisms.

Biotechnology is only growing as a field, overtaking management, placing it in the number two position as far as career options go, says Umaima Tinwala-Rajkotwala

for specific use. The impact of related developments in agriculture, health care, environment and industry have been clearly visible in India — more than 5,000 research publications, 4,000 post-doctoral students, several technologies transferred to industries and patents filed, including US patents.

In India, the science is important for its agricultural application. "Biotechnology applications," says Dr Vibha Dhawan, Director, Bioresources and Biotechnology Division, TERI, "have the potential to effectively and comprehensively meet India's poverty reduction and food security challenge." Adds Manju Nichani, principal of K C College,



For more information on the field, contact:

■ National Centre For Cell Sciences, Pune:

<http://www.nccs.res.in>

■ National Institute Of Immunology, New Delhi. Dr G C Mishra, Director, NCCS, NCCS Complex, Ganeshkhind, Pune - 411 007. Email: infonccs@gi-aspn01.vsnl.net.in

■ Centre For DNA Fingerprinting And Diagnostics (CDFD), Hyderabad:

<http://www.cdfd.org.in>

■ National Brain Research Centre, New Delhi.

<http://www.nbrcindia.org>

■ National Centre For Plant Genome Research (NCPGR), JNU, New Delhi: Dr Ashish Dutta, E-mail.

adutta@jnuniv.ernet.in OR asisdatta@hotmail.com

■ National Bioresource Development Board. Dr S Natesh, email natesh@dbt.nic.in

Arts and Sciences, "I see it as the next big thing in India. Fields like IT, for example, have a tendency to fizzle out. Though computers will always be a part of our lives, the craze has gone. Biotechnology, on the other hand, offers newer fields of research, keeping students interested."

K C College and V J Vaze College in Mumbai offer biotechnology as a vocational course. Such is its popularity, that the colleges get over 100 applications for 30 seats. "Not many students are aware that the Mumbai University has started a degree course. I am, however, very conscious of it, and have asked if K C can teach the subject," says Nichani, adding, "We already have a tissue culture lab, so I don't think we'll have a problem."

Biotechnology, being a research-oriented field, requires special equipment and labs, backed by a competent faculty. "Teachers will come in from other states once we get the ball rolling," says an optimistic Nichani. Agrees Dr Dighe, "I will be difficult initially because of its 'special' status, but we will manage." Which is why the University will continue to offer it as a vocational course as well.

However, there's a nagging question. Are there enough jobs for the graduates? Also, students are hoping that the curriculum (yet to be set) meets the industry requirements. "The industry will also have to change for us. It's a growing field, and when it booms we need skilled manpower for the same. We cannot be left behind," explains Dr Dighe. Even Nichani foresees a lot of scope hoping that the first batch finds placements. It's a waiting game until then.

Environmental tech industry seen growing to \$13b

Sudha Nagaraj

NEW DELHI 9 APRIL

THE global market for environmental technology industries is expected to see an unprecedented boom in the next five years. The environmental engineering and waste disposal market, estimated at \$550 billion, is expected to grow to around \$700 billion by 2005.

While the market for environmental technology and services has been restricted to the industrial world, developing countries are expected to increase their demand substantially. It is with this backdrop that a three day 'Science and Technology India 2002' international exhibition and conference is beginning tomorrow in the Capital's Pragati Maidan. About 45 speakers and 58 exhibitors are participating. According to the Indo German Chamber of Commerce, developing countries would account for 10 per cent of the global market by 2010. As per the forecast, Asia would increase its market share from 4 per cent in 1996 to 14 per cent by 2010. The shift would be due to the industrial growth and higher awareness, not to mention the need to provide an efficient infrastructure for industry. The market in India is projected to grow the most in the coming years — estimated at \$8 billion in 2000, it is expected to grow to \$13-14 billion by 2005.

While private sector involvement is on the increase (Build Own Operate and Transfer and Build Own Operate projects are on), India's current spend on environmental protection is just 0.5 per cent of its GNP.

A Tata energy Research Institute report — Growth with resource Enhancement of Environment and Nature — reveals that India is losing at least 10 per cent of its national income due to environmental degradation. "There is a need to step up our spend to 1-3 per cent as in developed countries," says Prem Behl, managing director, Exhibitions India Pvt Ltd.

The bottomline is that India offers excellent business prospects for foreign investors. With finance from multilateral and bilateral agencies coming in, nine areas have been identified as the most promising opportunities.

Green and Friendly



Environment technology market potential in India

Segment	1995	2000	2005	2010
Water/wastewater/sludge treatment	4.0	7.5	13.0	22.30
Waste treatment bio-remediation	0.07	0.15	0.8	4.40
Air Pollution control	0.03	0.06	0.2	0.42
Energy Saving techniques	0.18	0.30	0.4	0.56

Source: Indo German Chamber of Commerce (\$ billion)

Govt mulls plan to rate regulators

Subhomoy Bhattacharjee
NEW DELHI, 8 APRIL

It is now the turn of regulators to be evaluated. In line with the rating of companies in different sectors by credit rating agencies, the Centre is considering a proposal to assess the performance of regulators.

The proposal is in the preliminary stage, government sources say. It involves an impartial analysis of regulatory bodies, including the Telecom Regulatory Authority of India, Central Electricity Regulatory Commission, Insurance Regulatory and Development Authority and Tariff Authority for Major Ports.

The proposal is important because unlike ministries, regulators are not under the direct supervision of any organisation.

A concept paper, prepared by the Tata Energy Research Institute (TERI), says regulators should be ranked in terms

UNDER THE LENS

- Proposal involves an impartial analysis of regulatory bodies
- Rating could take into account criteria as to whether a regulator provides information to consumers in a simple manner

of transparency, communications with stakeholders, flexibility and level of accountability, among other things.

Explaining the position, S K Sarkar, senior fellow at TERI, said such a rating could take into account criteria as to whether a regulator provides information to consumers in a simple manner.

Sources say a rating like this will have to be undertaken by an organisation that is not a

stakeholder in any sector. Otherwise, it will defeat the purpose.

With the government leaving almost each sector of the economy to a regulatory body, the role of these agencies has come under public scrutiny.

While regulators are accountable to Parliament, they have been given a high degree of autonomy to ensure that there is no interference in their functioning. But it is necessary for people to be satisfied with decisions like setting tariffs.

Some officials of Infrastructure Development Finance Company said the idea was to rank the country's regulators in terms of how proactive they have been. "Our regulators are not interested in incentive regulations, and have largely concentrated on cost-based schemes," they say.

According to these experts, it will be difficult for the government to step in at this juncture.

THE HINDU BUSINESS LINE

Perform social duty, Jaitley tells corporates

Our Bureau
NEW DELHI, April 8

THE Union Minister for Law, Justice and Company Affairs, Mr Arun Jaitley, today urged the corporate sector to sponsor museums and libraries apart from other sectors in a bid to enhance social responsibility towards the country.

Inaugurating a conference on 'Promoting corporate citizenship Challenges and opportunities' organised by Tata Energy Research Institute (TERI) here on Monday, he said that the most immediate concern of the sector should be towards environment.

Citing reports, the Minister said that only 11 per cent of the top 660 firms were conscious of discharging their social obligations. He said that the pressure on profit margins had deterred many private sector companies from sponsoring the cause of social responsibility.

However, the corporates have entered education and health sectors already, he said. A data compiled by the Department of Company Affairs (DCA) reveals a grim picture of the Indian corporate sector, the Minister said.

M. D. C. UNIBL
BHOPAL
9 APR 2002

IFFCO plant gets TERI award

BHOPAL. The Phulpur plant of Indian Farmers Fertiliser Cooperative Ltd. (IFFCO) has won Tata Energy Research Institute (TERI) Cooperative Environmental Award this year for efforts in maintaining the environment and ecology by adopting cleaner technologies and recycle of wastes. TR Balu, Minister, presented the prestigious award for Environment and Forests at Phulpur.

IFFCO Phulpur plant was selected for this award among the companies having a turnover of above Rs 500 crore. IFFCO's Phulpur plant consisting of a 900 MTPD Ammonia plant and 15000 MTPD urea plant based on naptha feedstock. While the expansion plant at Phulpur consists of 1350 MTPD ammonia plant working on TopSoc technology and 2X11000 MTPD urea plant has Snamprotekt technology.

TERI corporate environmental award to IFFCO

Our Bureau
NEW DELHI, 7 APRIL

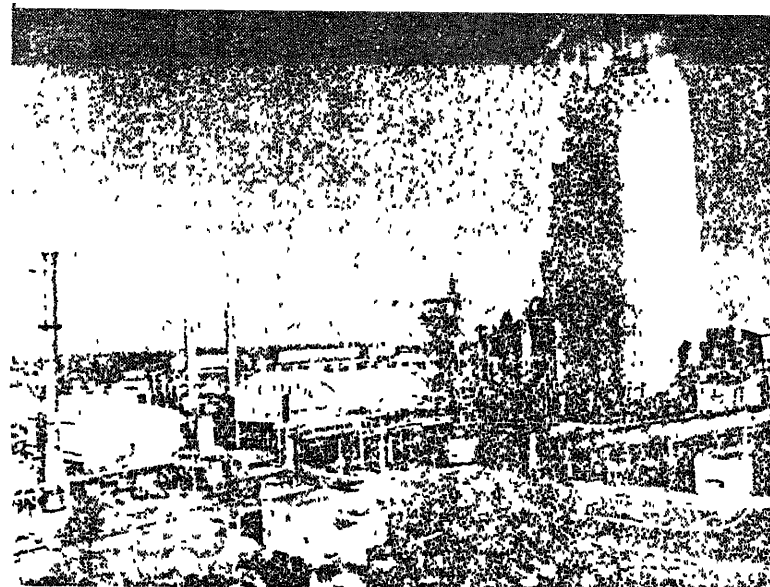
The Phulpur Plant of the Fertiliser Corporation of India (FCI) has won the TERI Corporate Environmental Award this year for its efforts to sustain the environment and ecology by adopting cleaner technologies and recycling waste. The award was presented by TR Balu, Minister for Environment & Forests, Dr Raja Ramanna, MP, and former Chairman of Atomic Energy Commission was the guest of honour.

The Tata Energy Research Institute (TERI), as a part of its activity to promote sustainable practices in the Indian industry, has awarded the TERI Corporate Environmental Award in Category-I for companies with a turnover up to Rs 100 crore, Category-II for companies with a turnover from Rs 100-500 crore and Category-III for companies with a turnover above Rs 500 crore. The IFFCO Phulpur Plant was selected

for this award among the companies having a turnover of above Rs 500 crore.

The plant, comprising a 900 MTPD ammonia plant and 1500 MTPD urea plant based on naphtha feedstock, was commissioned in 1980, using the Kellogg technology for ammonia and Stamicarbon for urea. The expansion plant at Phulpur, comprising a 1350 MTPD ammonia plant incorporating the Topsoe technology and 2 x 1100 MTPD urea plants using Snamprogetti technology were commissioned in 1997.

The plants have the latest technology equipment for pollution control and have updated them from time to time. The laboratories have state-of-the-art instruments for analysis and sensors have been installed at strategic points in the plants for online monitoring of ambient air. The microprocessor-based control system maintains the process parameters at the best possible datum so that the plant



is operated close to design conditions.

Efforts have been made to utilise the resources to the maximum possible extent to minimise

waste. For example, the water consumption level of 19 m³ per tonne of urea during 1989-90 has been brought down to 9.47 m³ per tonne in 2000-01 for the

old plant and 6.12 m³ per tonne in the new expansion plant. The measures include reuse of steam condensate, process condensate, flash tank condensate, etc.

The Reverse Osmosis Water Treatment Plant makes the treated effluents reusable in the plant. Thus, there is no liquid effluent discharge from the plant.

The plant has a coal based power plant for captive use, which generates about 50 MTPD fly ash. The fly ash is being used for land filling, use in cement, etc. 1.67 lakh tonnes of fly ash has been generated from the plant since its commissioning. The plant has also been a pioneer in the use of biogas for power generation.

capacity and thus reduced the accumulated stock.

The changeover of chromate based cooling water treatment system to non-chromate based water treatment system, developed at a later stage, makes the plant cleaner.

The Phulpur plant has won several awards for promoting environment and pollution control measures from such reputed bodies as Fertiliser Association of India and the International Greenland Society of Hyderabad. Apart from the plant effluent control systems, IFFCO puts a greater emphasis on the general environment management such as development of green belt, domestic sewage treatment and utilisation of treated sewage for horticulture and farming, segregation of biodegradable and non-biodegradable wastes and their uses and awareness programmes for maintaining cleaner and greener environment and so as to strike ecological balance of the nature.

ECONOMY

Proposal says watchdog should be ranked on transparency, accountability, communication

Govt mulls plan to rate regulators

Subhomoy Bhattacharjee
NEW DELHI, 7 APRIL

It is now the turn of regulators to be evaluated. In line with the rating of companies in different sectors by credit rating agencies, the Centre is considering a proposal to assess the performance of regulators.

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UNDER THE LENS

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said the idea was to rank country's regulators in terms of how proactive they have

"Our regulators are not interested in incentive regulations, and largely concentrated on cost-based schemes," they say.

According to these experts, it will be difficult for the government to step in at this juncture. Nothing in the statutes makes it mandatory for such bodies to apply for such a rating. Here, it must be a voluntary approach on their part. But they say once the scheme becomes operational, it is quite likely they will get themselves rated.

Pachauri vows to head UN climate panel

Bhavatosh Singh
in New Delhi

April 5 — This campaign is hotter than global warming. An Indian scientist, Dr R K Pachauri, head of India's premier environmental research and monitoring body, the Tata Energy Research Institute, is pitted against Dr Robert Watson, the World Bank's chief scientist. The prize is the five-year term as the chairman, United Nations' "Inter-governmental Panel on Climate Change". The body with a vital role in influencing government decisions across the world on environmental policy.

Dr Watson is also the panel's incumbent chief and is contesting the post for the second time. Dr Pachauri, on the other hand, is one of the five vice-chairmen of the panel.

Allegations have been levelled by both the players. Reports in a section of the Indian Press said that the candidature of Dr Pachauri is being promoted by President Mr George W Bush's administration and a petro-giant — Exxon Mobil — as he (Dr Pachauri) supports higher emissions standard and is sympathetic to the multi-billion dollar auto industry. Lobbyists of Dr Watson also claimed that Dr Pachauri is being promoted as "the US wants to improve relations with India". Reacting to it, Dr Pachauri said, "A day before an article appeared in the New York Times which said that President Bush is unaware that he (Dr Pachauri) is one of the vocal critics of his environmental policy."

Dr Pachauri added, "It's a calumny of lies and a misinformation campaign launched by Mr Bob Watson as he wants to get the sup-

port of non-governmental organisations."

The New York Times article on 3 April said, "Some panel scientists said Mr Bush might end up regretting the choice, noting that Dr Pachauri has repeatedly criticised the President for not acting more aggressively to cut emissions from the United States, which is the largest source of heat-trapping gases."

Dr Pachauri also asserted that he had been going "hammer and tongs" against Exxon-Mobil and had written over 20 articles against the firm's environmental policy. He, however, agreed that Dr Watson had also stood against Exxon-Mobil but added "Exxon-Mobil dislikes me more than Dr Watson."

When asked what could be the reason for such a malicious campaign, he claimed, "Bob has even written a letter to Geneva and

New Zealand to get support for his candidature. Opponents are planning to even field a candidate from a less developed country so as to split the votes of developing countries. This will ultimately help Bob win the election."

A livid Dr Pachauri said one of the reasons why Dr Watson is opposing Mr George W Bush's environmental policy is because he is a "lackey of the previous Clinton administration. During the Clinton administration, he was shifted from the White House to World Bank violating all job requirements. All this was done because he was close to the then vice-president Al Gore." An optimistic Dr Pachauri, however, said, "I will make sure that I will become the chairman of the panel." According to the environment ministry, the government had cleared Dr Pachauri's name for the world panel on climate change last year.

Bush wants pro-US Teri chief at helm of UN climate group

SONU JAIN

NEW DELHI, APRIL 5

THE US government is supporting Rajendra K. Pachauri, director general of Tata Energy Research Institute (TERI), as chairman of UN's International Climate Change Group.

Pachauri is being supported by President Bush as he is pro-industry and his stand on global warming is closer to the US government's. Lobbying for him are energy giants and oil companies. Back home, Pachauri has vociferously spoken against CNG in Delhi and instead advocated the use of ultra low sulphur diesel.

A formal note from the US Department of State sparked off a debate between energy groups and environmentalists in the US. On the one side are the anti-industry scientists and developing countries who insist on climate change as a global responsibility for global warming is concerned. On the other hand, the US states (led by the US), pro-industry, has said the evidence says that global warming does not exist and even if it does, it is not a problem.

"I have not been directly approached by the US government to support me, the Association of Renewable Energies and Hydropowers," said Pachauri.

He was favoured by the US because his opponent and present chairman Robert Watson is known for his hard talk on the US government over issues of climate change. Pachauri, in contrast, is seen as an "industry" man who will be more amiable to the US line.

Watson is an atmospheric researcher and chief scientist at the World Bank. He is considered one of the leading experts on climate change. With his open criticism of the US administration and insistence on developed countries reducing human emissions of greenhouse gases, he has been seen as a strong ally of developing countries.

Adding to the debate is the National Resources Defense Council (NRDC), a group of scientists and environmentalists with 500,000 members, releasing papers showing that the energy industry has been pressing for removal of Watson since Bush took over. Oil giant Exxon Mobil sent a confidential memo to the White House urging Bush to replace Watson.

Pachauri is one of the five vice chairs at the IPCC. He has two PhDs in economics and industrial engineering. Critics say he lacks a stronger base in atmospheric science. "There is a need to study the economics behind the impact of climate change," argued Pachauri.

The last two times, the candidates had been elected unanimously. If elected, he will be the first from a developing country. The big days are between April 17 and 20 when the panel will elect the 30-member bureau.

HINDUSTAN TIMES

9 ATM

23 APR 2002

3 industrial units get TERI awards

HT Correspondent
New Delhi, April 5

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THREE INDUSTRIAL houses have been awarded the first-ever Tata Energy Research Institute Corporate Awards in recognition of their leadership efforts in environmental management and sustainable initiatives. Announcing the awards, Director General TERI R K Pachauri said that the best practices through international stan-

dards were the benchmark to decide the awards. He said TERI would make these awards an annual feature.

The winner in category I (companies with turnover less than Rs 100 crore per annum) went to Shriram Alkali and Chemicals Ltd, Jhagadia Unit. The award for category II (companies with turnover between Rs 100 and Rs 500 crore per annum) went to Seshasayee Paper and Boards Ltd,

Erode, and the winner in Category III (companies with turnover above Rs 500 crore per annum) went to IFFCO, Phulpur Unit.

TERI received 89 entries from major sectors of Indian industries ranging from paper and synthetics to chemicals and petrochemical units to refineries. A seven-member jury headed by Justice J S Verma, chairperson, National Human Rights Commission, decided on the awards.

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Power Trading: Ray Of Hope For Energy-starved

OUR INFRASTRUCTURE BUREAU
New Delhi, April 5

The goal of moving from a deficiency-ridden power scenario to a free market regime, developed through power trading, is not too far to achieve provided the right policy initiatives and infrastructure are in place.

A one-day workshop on developing power markets in India, organised by the Tata Energy Research Institute (Teri) and Power Trading Corporation (PTC), deliberated on how the goal can be achieved through short-term, transitional and long-term steps.

Power trading can be defined as

free movement of energy from a surplus zone to a deficient area at a cost which is not only reasonable but also sustainable for utilities to pay and recover from the end consumers. There was unanimity on the approach to achieve the desirable market — begin with what can be achieved in the near future and then reach a scenario where there is open access wired business by transmission companies and where there is commodisation of power.

Sharing his experience of successfully selling power to the Delhi Vidyut Board (DVB), Dr Mukesh Raizada, vice-president (business development), Malana Power

Company, stressed the need to define short-term power trade and process of energy accounting through government policy. He felt that documentation for effecting short-term sale of power should be developed. Alongside, regulation and infrastructure for spot trading and power pools needed to be developed.

Expressing his displeasure with Uttar Pradesh and Madhya Pradesh state electricity boards (SEBs) not allowing their sister states of Uttaranchal and Chhattisgarh to sell surplus power to Delhi, DVB chairman Jagdish Sagar said that as long as there is allocated power, SEBs will continue to behave as

landlords. "We have excellent agreements with them but they do not permit supply. We can buy power from Uttaranchal but Uttar Pradesh has a right on it," he noted.

The role of regulator also came up for discussion. It was also felt that regulator assumes importance so long there is scarcity and once a free market is in place, regulator should take a back seat.

Chairman and managing-director of BSES Ltd RV Shahi said that quality, reliability and price are things which come with competition. Elaborating on what can be achieved in the short term, Mr

Shahi said transmission of power is a long process. However, competition will take time. Mr JP

Infrastructure has been plagued by weaknesses, weak systems and commercial priorities. The transmission sector can be improved by competition.

Govt Mulls Central Power Tribunal

Tribunal will accord uniformity of regulation, says Prabhu

OUR INFRASTRUCTURE BUREAU
New Delhi, April 5

The government is planning to set up a central power tribunal, which will address all appeals against the orders of the regulatory commissions at the Centre and state levels. All power-related disputes will then come to this tribunal.

Speaking at a workshop on 'Developing Power Markets In India—Needs, Problems and Prospects,' organised jointly by Tata Energy Research Institute (TERI) and Power Trading Corporation (PTC), power minister Suresh Prabhu said that under the present legislation the central regulator had no control over state regulators as a result of which there was no uniformity of regulation in the country.

"The current legislation does not address this issue. Therefore, in order to ensure uniformity of regulation all over the country, we

should have a institutional mechanism in place where the regulators have same spirit of regulation. We have accordingly made a provision in the new Electricity Bill, currently awaiting Parliamentary approval, for setting up of a central tribunal," he said.

On issue of power trading, Mr Prabhu said that in short-term PTC was already trading small surpluses of power from one region to the other. However, he said that for full-fledged trading of power, a lot of infrastructure had to be first put in place.

"What we need is not just a generator or a buyer like PTC to make generation free from market risks. If this happens, then PTC would, in fact, become a risk-trading corporation for non-payment from the buyers. Ultimately, again it will be the government, which will then be fixing such defaults. Therefore, no guarantees from the state or the Centre can work till the state elec-

tricity boards (SEBs) are not made responsible," the minister said.

Mr Prabhu said, "Governments cannot be agents of recovery. We need to develop a system where such defaults do not take place. Therefore, a proper tariff fixation system and a proper transmission system need to be put in place first before developing power markets."

He said that introducing spot markets for power at this stage would actually "put power market in a spot." "For spot trading mechanism, a lot of ground works have to be first done, like having a proper regulation system in place for all states as power has to flow from one state to the other. Such things cannot be based on imaginative ideas. For this, we have to first take our SEBs through a proper reforms passage and then introduce such ambitious plans," he added.

Mr Prabhu said that the worldwide power markets were developed, but this had been a process

which they had undertaken over a period of time. "They have followed it carefully so that eventually success is guaranteed. So, instead of giving guarantees, we should fix responsibilities for effective operation of the system. Setting up of CERC and SERCs was a first step in that direction and now with the setting of central power tribunal, that goal will be accomplished," he added.

Mr Prabhu said that trading of power was actually a financial deal. But to see that this resulted into real time transmission, proper transmission-links should be there, he added. "In the absence of such a proper T&D systems, such financial deals will not succeed. Towards this, the Centre is working on a national grid for efficient transmission of power across the country. This system will ensure that defaults do not take place either in payments or in transmission of power," he said. ♦

Indian is climate change hot property

By Chidanand Rajghatta
Times News Network

WASHINGTON The United States is backing the candidature of R K Pachauri, chief of the Delhi-based Tata Energy Research Institute (TERI), to head a UN panel on climate change

The decision has set off a storm among environment groups in America because it is believed the state department is endorsing Pachauri hoping that he will be more sympathetic to the American auto industry and the Bush administration's views on global warming. He is also seen as a candidate of Exxon-Mobil, which does not want to cut back on emissions.

If his appointment goes through, Pachauri will replace chairman Robert Watson, an American who was appointed by the Clinton ad-

ministration in 1996. Watson differed sharply with the Bush White House on global warming and campaigned aggressively to cut emissions of heat-trapping gases released by the combustion of coal and oil. His position riled America's powerful auto and oil industries.

The Bush administration, with its strong business and industry orientation, has virtually reneged on the Clinton administration's commitment on global warming issues, pitting itself against most developing countries and practically the whole world.

In recent days, Pachauri had suggested that the impact of climate change on the developing countries would be far worse than that estimated to occur in the developed world, a view that has been seized upon with relish

by the US auto industry.

The US itself has been a massive battleground for emission standards with powerful NGOs pitted against giant auto manufacturers. Several activists expressed concern that by backing Pachauri, the administration and the US auto industry may be trying to dilute the Intergovernmental Panel on Climate Change (IPCC). "Watson is an in-your-face Washingtonian. He could not be wished away. By opting for a candidate from a developing country, they can make him politically irrelevant domestically and sideline IPCC," a scientist, who did not want to be named, said.

Peter Frumhoff, a director with the Union of Concerned Scientists, said companies like Exxon-Mobil had campaigned to oust Watson. "I think the decision reflects a greater strategic relationship with India

Without taking away anything from Pachauri's expertise and eminence, it is definitely a political decision," Frumhoff said, hinting that the Indian government had lobbied for Pachauri.

Pachauri, who is currently the director-general of TERI, is also one of the five vice-chairmen of IPCC. A Geneva-based body established in 1988, jointly by the World Meteorological Organisation and the United Nations, the IPCC conducts periodic reviews of global warming.

The scientist added that while Pachauri, who is primarily an engineer and economist, brought in a great deal of expertise, the IPCC position needed someone with mastery over atmospheric sciences. Watson, who is a chief scientist with the World Bank in Washington, is an atmospheric chemist.

US backs Indian as UN climate panel chief

AGENCE FRANCE PRESSE

WASHINGTON, APRIL 3

THE United States is opposing the reappointment of a US scientist as chief of a United Nations panel studying global warming and is instead backing an Indian candidate, US officials said today.

"Today, the United States announces its nomination of Susan Solomon of the National Oceanic and Atmospheric Administration as co-chair of the UN intergovernmental panel on climate change working group I, and its

support of Rajendra Pachauri, the candidate proposed by the Government of India, as panel chairman," the State Department said in short statement.

Pachauri is now the head of the Tata Energy Research Institute (TERI) in New Delhi.

The officials cited White House unhappiness with the work of Robert Watson, the current head of the UN intergovernmental panel on climate change who has been a vocal critic of President George W Bush's environmental policies, as the reason for the US position.

US for Pachauri

WASHINGTON: The United States is backing Teri chief R K Pachauri, nominated by the Indian government, for appointment as chief of a United Nations panel studying global warming, US officials said —AFP

REPORT ON PAGE 2

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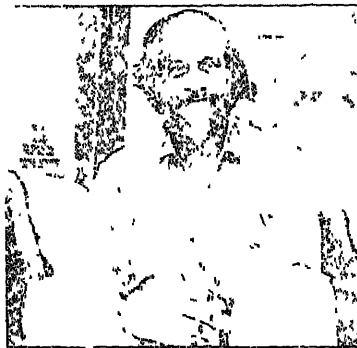


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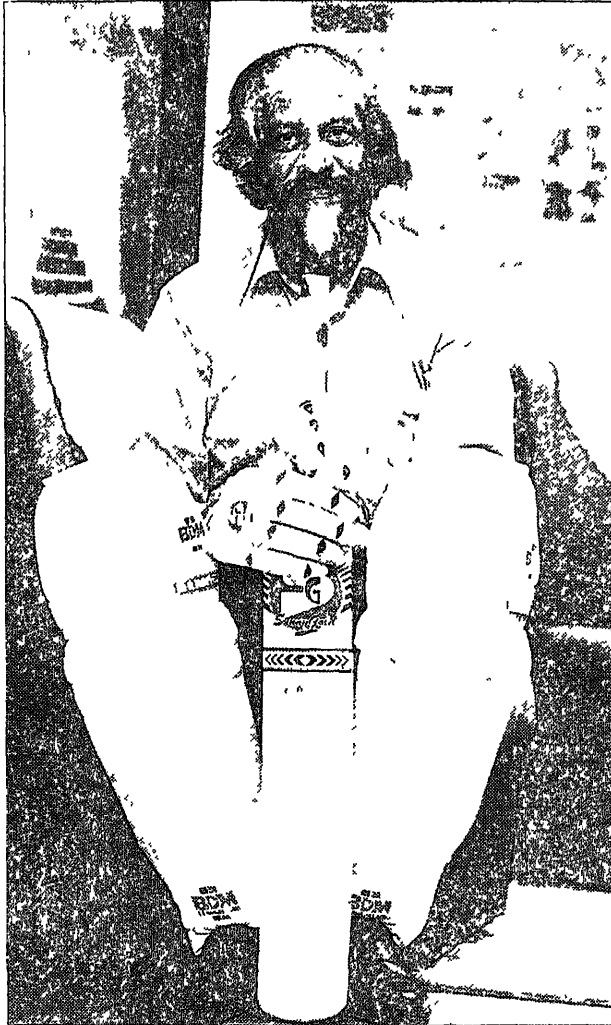
Campaign/D/TERI/02



CHILLOUT ZONE/4

**TERI director R.K.
Pachauri displays
energy of a
different kind**

Bowled Over By The Gentleman's Game



R K. Pachauri, 61-year-old Director of TERI, considers Sachin Tendulkar as the best contemporary batsman

PHOTO RAJ K RAJ

Aasheesh Sharma

R K PACHAURI, the 61-year-old director of the Tata Energy Research Centre (TERI), conserves his energy to bowl people over on a different wicket

Not many people know that the scholar, winner of numerous national awards including the Padmabhushan turns into a cricket fanatic once out of his workplace "I practice with the TERI cricket team at the nearby Ratan Chand Arya school grounds. And after having pursued the game for more than half a century I can confidently wield the willow," he says

The cricket bug caught Pachauri early. As an eight-year-old growing up in Nainital, young Rajendra graduated from practising with his elder brother to playing with a local club very soon.

"One of my most vivid memories of childhood cricket is being thrashed by my mother after I had bunked school for a club match. I remember clearly, I was the youngest member of the team and held my own with the bat. But got the beating of a lifetime in the bargain," he recalls.

After showing great promise as a batsman, Pachauri had the opportunity to be the first on the list of the first genuine allrounders India produced - the legendary

Dattu Phadkar.

Phadkar, who was coaching Eastern Railways showed immense faith in Pachauri and considered him one of his best students. "He was happy to notice that I had learnt to swing the ball and called me 'scholar'. I played at the Inter-Railways but then my academic interests took over and I could n't play at higher levels."

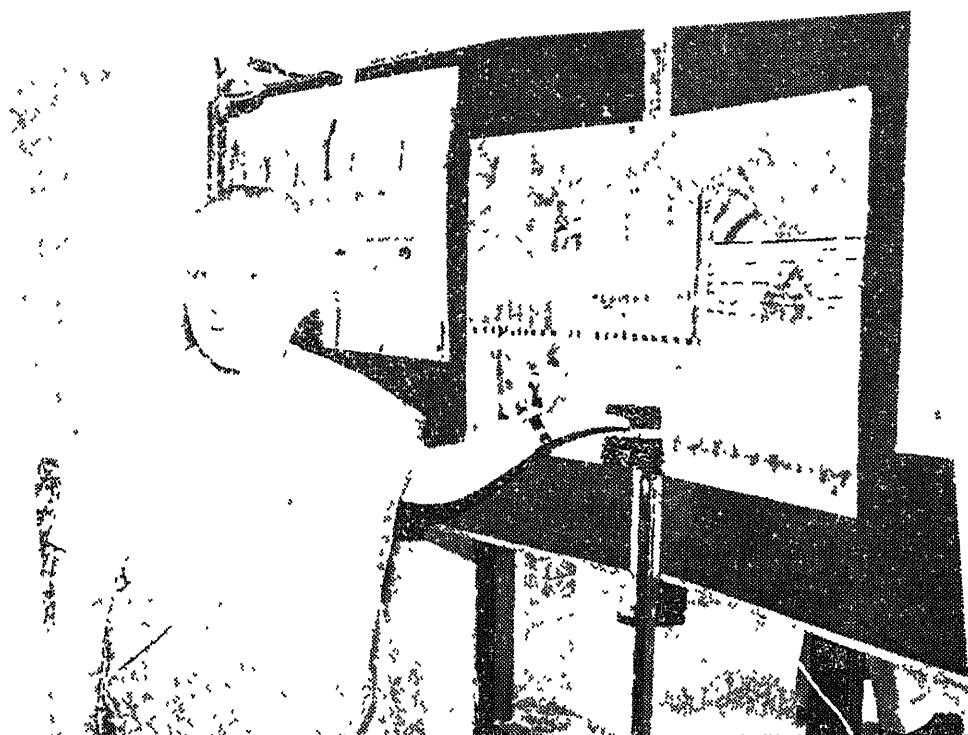
Besides the call of academics, the Ph.D. in Economics from the North Carolina State University was also involved in an unfortunate accident that cut his thumb. "Owing to wrong diagnosis and late treatment, the tendon of my thumb was damaged beyond repair and I have trouble gripping the ball subsequently," he says.

Still, the former adviser on energy to the UNDP can't resist the call of cricket and practices at least 45 minutes every day. How does he manage to keep fit?

"I am an avid swimmer and swim eight months in an year. Swimming is a vigorous workout but there's nothing like a spell of swing bowling to pump up my adrenaline," sums up the man who considers Sachin Tendulkar as the best contemporary batsman and the stylish Mush-taq Ali the most beautiful batsman he's ever witnessed in action. ■

Pachauri elected

LONDON: In a keenly contested election in Geneva on Friday,, R K Pachauri won the race for the prestigious post of chairman of the inter-governmental panel on climate change — *PTI*



Chief Minister Sheila Dikshit at a display of paintings made by schoolchildren on the occasion of 'Earth Day' celebrations at IHC in New Delhi on Monday *Suresh Chandra/Pioneer*

Pachauri elected as UN's green panel chief

By Chidanand Rajghatta
Times News Network

WASHINGTON India's pre-eminent energy specialist Rajendra Pachauri was elected to head a global climate panel on Friday after the Bush administration backed him against an American incumbent. Pachauri defeated Robert Watson 76-49 in a bitter and controversial election in Geneva that saw Washington support the Indian to chair what is formally called the International Panel on Climate Change (IPCC), a UN-mandated body that oversees rules and regulations relating to global climate changes.

The election outraged many NGOs and European countries that believe Watson, a World Bank executive who is an atmospheric scientist, was a victim of lobbying by

American automobile and oil companies because of his tough stand against emissions. Britain and Germany among other countries tried to effect a compromise by pushing for Watson as a co-chair, but American clout carried Pachauri to a comfortable win in a three-way election. Seven nations voted for Jose Goldenberg, a Brazilian. While being neutral on Pachauri, environmental groups pointed an accusing finger at the oil giant Exxon-Mobil for ousting Watson.

Pachauri is an engineer and an economist who founded the Tata Energy Research Institute in New Delhi. The environmental community is not against him and concedes that he too has a tough stand on emissions but it fears that he will make it easier for the US industry and the Bush administration.

Pachauri Defends Election As IPCC Chief

Dr Rajendra Pachauri, who has been elected chairman of Inter-governmental panel On Climate Change (IPCC) on Monday refuted western media reports that he had won the election because he was "pro-Bush administration." "I am appreciative of the US for support but I am not beholden to any particular country for my support, which comes from a group that not only supported my candidature but even fought for it," Dr Pachauri said at a press conference in New Delhi on his return from Geneva.

Tata Energy awards for corporates

Times News Network

NEW DELHI: Hoping today's modest take-off will grow into a movement, the Tata Energy Research Institute (TERI) has recognised corporate initiatives in environmental management with its first set of awards.

A panel chaired by NHRC chief J S Verma screened 89 case studies from diverse industry sectors to select three winners. Shriram Alkali and Chemicals, Jhagadia unit, wins in the category of companies with a turnover of less than Rs 100 crore a year. Seshasayee Paper and Boards, Erode, wins the race for category II — companies with a turnover between Rs 100 crore and Rs 500 crore a year. And, in the category of companies with a turnover of more than Rs 500 crore a year, the winner is Indian Farmers Fertiliser Cooperative's Phulpur unit. The awards were given on Wednesday evening.

It's recognition that environmental stewardship is not the prerogative of any one sector, said TERI director-general R K Pachauri. And, recognition that blending environmental concerns with business makes business sense.

So, the screening process looked not just at what each unit achieved in cleaning up its act and setting standards but also at how replicable its model was for those who wanted to follow. Shriram's unit, for instance, has reduced its total effluent generation from 578 cubic metres a day to between 400 and 460 — it hopes to halve that. Its water consumption is down by 140 cubic metres a day, leading to savings of Rs 8 lakh a year.

Three companies win Teri award

Sudha Nagaraj

NEW DELHI 3 APRIL

THREE companies which made it their business to reduce recycle and re-use effluents have won the Tata Energy Research Institute (Teri) corporate awards for environmental management and sustainable initiatives.

In coming days, environment is expected to occupy centre-stage in all WTO negotiations. Unless corporates weave in good environment management practices, exports

would be hit. Reason enough to look around and learn from examples chosen by Teri.

Shriram Alkali and Chemicals Ltd, Jhagadi Unit (with a turnover less than Rs 100 crore per annum), Seshasayee Paper and Boards Ltd, Erode (with a turnover between Rs 100-500 crore per annum) and IFFCO, Phulpur Unit (with turnover above Rs 500 crore per annum) have won the awards for the respective turnover categories. Announcing this at a press conference here today, R K Pachauri, director general Teri, said

89 entries were received from all major sectors of industry and the awards adjudged by a panel chaired by Justice V S Verma, former chief justice of India and chairman, National Human Rights Commission.

According to Sudhir K Agrawal, executive director (chemicals) of DCM Shriram Consolidated Ltd, a simple method of waste segregation and recycling—with ISO 14000 certification—has helped reduce effluent generation from 3.8 metre cube per tonne to 0.7 metre cube per tonne of caustic soda.

Corporates' role in conservation highlighted

Our Bureau
NEW DELHI, April 3

WITH environmentalists predicting that the next war would be fought over water — conservation of natural resources appears to be the key to good "corporate social responsibility", according to winners of the Teri Corporate Awards for 2000-2001. And Teri seeks to make the awards an annual feature.

The winners this year include Shriram Alkali and Chemicals Ltd (Jhagadia Unit) in the less than Rs 100-crore turnover category, Seshasayee Paper and Boards Ltd (Erode), in the Rs 100 to Rs 500 crore

per annum category and IFFCO (Phulpur Unit) in the over Rs 500 crore category.

An IFFCO representative said that the company had a corporate policy on environment covering its four plants, two in Gujarat and Uttar Pradesh, respectively.

Top brass at Seshasayee said that the company was trying to integrate between its sugar and paper businesses and the farmer. He pointed out that they were pioneers in using bagasse, the waste from their sugar mills, for paper making.

A representative of Shriram Alkali said that cutting cost, energy and waste was the only way to improve bottomline in a competitive industry, where profitability

depended on what happened in the international market.

He said that all 181 personnel were trained in TQM procedures and the company was looking at zero-effluents plant in two years' time.

Mr P K Pachauri, Teri Director-General, said that the awards were judged by a panel chaired by Justice J S Verma, former Chief Justice of India and current Chairman of the National Human Rights Commission. The panel also includes Dr Gowher Rizvi, representative of the Ford Foundation. About 89 companies applied for the award, according to a Teri representative.

Corporates flash their 'green card'

Yoga Rangatia

New Delhi

IN THE age of global trade, the new market mantra for corporates is to flash their green credentials. Corporates have been quick to lap up ISO 9000 certification for quality and ISO 14000 for environment management to impress overseas markets in the last couple of years.

These may be foreign certifying agencies, whose norms are not easy, or inexpensive, to meet. In a truly Indian trait, environmental non-governmental organisations are also beginning to put their stamp on environmental performance of Indian manufacturers.

Tata Energy Research Institute (TERI) on Wednesday announced winners in the category

Environmental Excellence as part of its Corporate Round table on Strategies for Sustainable Development and Environment.

Ironically, all the top winners for environmental excellence are from sectors known to be highest industrial polluters — chemicals, fertilisers and pulp and paper. Little wonder, the three CFOs who are to receive the awards this evening from Environment Minister T. R. Baalu are gleeing. After all "profits" may be a dirty word but green profit comes guilt-free.

TERI received 89 entries from the Indian industry. Criteria for selection include pollution prevention,

scientific and technological innovation, environmental leadership, environmental benefits, model for business community and programme commitment.

The entries were then grouped into three categories, turnover less than Rs 100 crore, that between Rs 100 and Rs 500 crore and above Rs 500 crore turnover per annum. The verdict went in favour of Shriam Alkali and Chemicals Ltd, Seshasayee Paper and Boards Ltd and IFFCO in the respective categories. But the rating logic may be skewed to an extent that it does not discourage pollution-generation. This is because the rating is from among those industries which have applied for the awards. Which means that only those companies that have something to show on their green scorecards will apply. Rogue elements of the industry will merely continue to pollute and remain the bane of India's efforts to clean the environment. There is only 'carrot' for the good guys but no 'stick' for the baddies.

This is also demonstrated in the poor number of applicants to the award. For instance, of the huge petrochemical, chemicals and fibres sector only 12 have applied. From among the paper and boards sector, another big guzzler of water and heavy polluter, only five have applied. Out of the entire gamut of Indian industry, only 89 corporates have applied.

The award is based on case study

submitted by the company which is subsequently scrutinised by TERI. The selection criteria lay stress on pollution reduction which is not an under-achievement. But resource use and recyclability of the product may not have had carried as much weightage.

Everybody is a winner in this contest. A papermill using non-forest wood and bagasse to manufacture paper also wins alongside a fertiliser plant which requires huge inputs in another category.

On being asked the turnover criterion for categories, Mr R. K. Narang, distinguished fellow at TERI said "higher the turnover, greater the affordability for better environmental technologies." Despite the segregation of big guys, only 13 companies with turnover less than Rs 100 crore applied for the awards. Rating big industry for clean production by an independent agency is a welcome step, but Indian industry must think innovatively how to bring the small scale sector on board. SSI account for half of India's export as well as 60 per cent of pollution load. On the one hand, flouting environment regulation and labour laws is rampant in the small sector. While on the other, the sector is facing a tough time from global trade as import tariffs are falling.

What is needed is incentives for supply chain greening, which will bring immense benefit to the small sector.

Teri Felicitates Corporates

Continued from Page 1

On his company's environmental initiatives, he said "Our emphasis is on energy and waste reduction and this has certainly helped in improving our environmental performance."

C. S. Kasi, president (operations) of Seshasayee Paper and Boards, said: "It is a recognition of our endeavour as a pioneer in the world on the use of bagasse for paper making and also for our use of wood from only

manmade plantations."

V K Bah, executive director (technical), IFFCO, said, "It is important for the industry to realise that it needs to uplift the society if it wants to grow more and thus fulfill its social responsibility." In today's context the keyword in corporate environmental policy is conservation of energy and water, he added. Saying that the criterion set for the awards were of international standards, Mr Bah added "It was comprehensive and of very high quality."

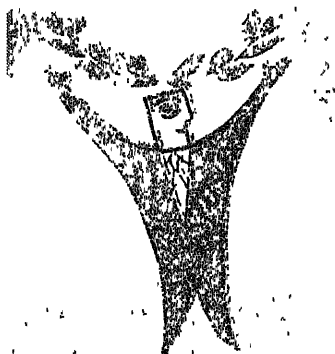
Bottomline: Shriram Alkali, Seshasayee Paper, Iffco win Teri Environmental Awards

Teri Felicitates Corporates For Green Initiatives

RAJKUMAR LEISHEMBA

The first Teri Corporate Environmental Awards 2000/01, instituted to recognise the environmental excellence and corporate social responsibility in India and to be presented annually, were presented in the Capital on Wednesday

Shriram Alkali & Chemicals Ltd was conferred the award in Category I (companies with an annual turnover of less than Rs 100 crore) while Seshasayee Paper and Boards, Erode, and IFFCO, Phulpur, were the winners in Category II (companies with an annual turnover of Rs 100 crore to Rs 500 crore) and Category III (companies with an annual turnover above Rs 500 crore) respectively. The winners were chosen based on factors like pollution



prevention, scientific and technological innovation, environmental leadership, environmental benefits, setting a potential model for the industry, and demonstrated programme commitment

Announcing the winners for this year, Dr R K Pachauri, director-gen-

eral of Teri, who was also a member of jury, said "The awards are unique because the winners have done a wide ranging activity, which is driven not only by the interest to make profits but also by the care for environment"

The awards were adjudged by a seven member panel of judges chaired by Justice J S Verma, former chief justice of India and currently the chairman of National Human Rights Commission. Other members of the jury included Vera Lucia Machado, ambassador of Brazilian Republic to India, V Anand, vice-chairman of National Environmental Appellate Authority, Dr Gowher Rizvi, representative of Ford Foundation, India, Dr Suman Bery, director-general, National Council of Applied

Economics, and Dr Sanjaya Baru, editor of *The Financial Express*

Commenting on the response of the industry to the awards, Dr Pachauri said "It is not only the number of applicants for the award, but also the quality of the applicants that we received, which is very encouraging."

Commending Teri for instituting the awards, S K Agrawal, executive director (chemicals), Shriram Alkali & Chemicals, said: "The composition of the panel of judges, with different eminent personalities from different fields, speaks volumes about Teri's commitment." He added that being eco-friendly is one of the ways to improve the bottom-line of a company

Continued on Page 13



April 3, 2002

2000/01

HONORING INDIAN CORPORATES FOR ENVIRONMENTAL SUSTAINABILITY PRACTICES

■ Shriram Is A Winner All The Way

The prize winner in the first category, Shriram Alkali & Chemicals cuts down on water consumption, thereby improving its bottomline

Samcor Mirrors
New Reality

■ MSPL Mines Clean Profits

■ Seshasayee Irrigates Profits From Effluents

Seshasayee Paper and Boards wins the award in the second category for its environmental initiatives, which include using wood from manmade plantations

■ DLPont Makes A Point

■ Environmental Orientation

■ IFFCO Nurtures Seeds Of Sustainability

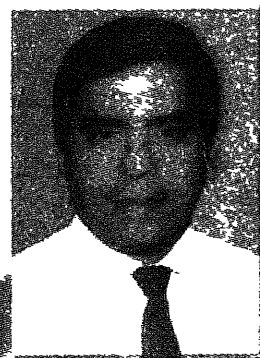
IFFCO, Phulpur, wins the award in the third category for practising a strong environmental policy, both at the company level and the plant level

■ Harihar Sets High Standards

■ Gujarat Ambuja Cement's New Image



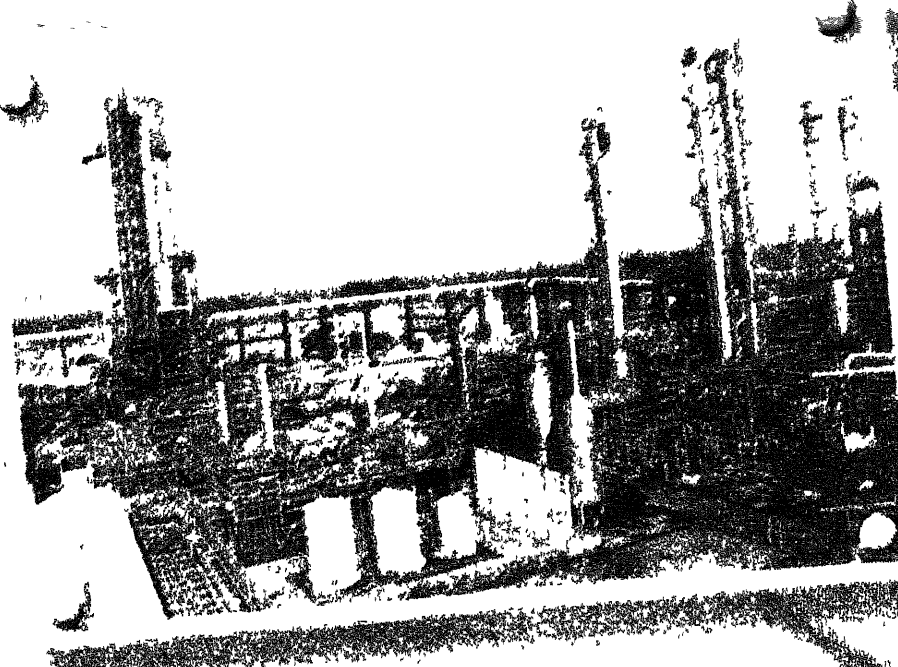
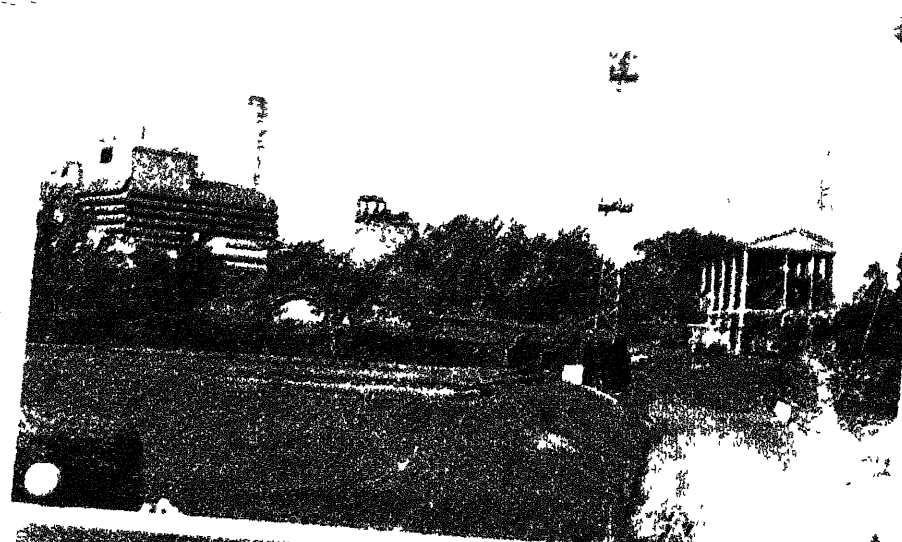
S K AGRAWAL
Executive Director (Chemicals)
Shriram Alkali &
Chemicals



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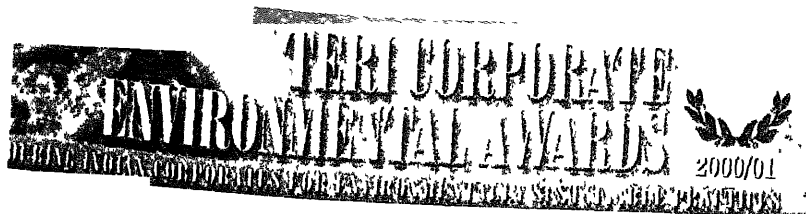
**Such awards are
not new to us**

N GOPALARATINAM
Chairman & MD
Seshasayee Paper
and Boards



David L. Miller
Director

USFMAE,
Managing Director
ITECO

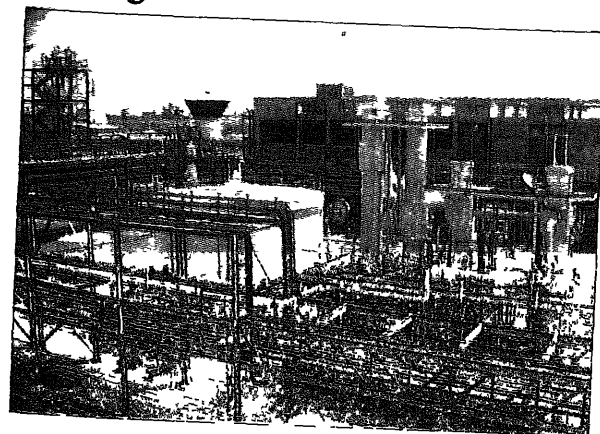


Shriram Is A Winner All The Way

SHRIRAM Alkali & Chemicals (SAC) based at Jhagadia (Bharuch) in Gujarat has won the TERI corporate environmental award in Category I for companies with turnover under Rs 100 crore per annum. With an employee strength of 181 and an annual turnover of Rs 8.8 crore, the unit of DCM Shriram Consolidated Ltd produces chemicals, including caustic soda, chlorine, hydrogen and hydrochloric acid.

SAC has both an environmental policy and an environmental cell at the facility level. In fact, the environmental management system (EMS) is in place at the facilities of DCM Shriram Consolidated at Kota, Alwar and Tonk in Rajasthan, and Shahjhanpur in Uttar Pradesh also.

SAC appraises its efforts in environmental protection in its annual reports and has to its credit environmental and



sustainable development-related awards in the past five years of its operation at Jhagadia. It has won the National Energy Conservation Award in the chlor-alkali sector given by the power ministry for two years running. The National Energy Conservation Award and two awards for unique and innovative efforts in energy conservation, given by the gov-

ernment of India, also testify to its leadership in this field.

The company, in its effort to help the environment, has also invested Rs 20 lakh in rain water harvesting. The initiative is aimed not only to save fresh water but also to recharge ground water and provide better quality raw water to generate less quantity of effluent.

'We Get Wealth From Waste'

SHRIRAM Alkali and Chemicals, a division of the DCM Shriram Consolidated Limited, located at Bharuch has won the TERI corporate environmental award (Category I) this year. Excerpts from an interview with the company's executive director (chemicals), Sudhir K Agrawal.



ing it as a product. Our sales have picked up to the extent of Rs 3 crore per year. It's a direct value addition. We also took action to internally use hydrogen not only for hydrochloric acid production, which everybody does, but also as a fuel to replace furnace oil in our caustic soda flaking unit.

In your view, what is it that enabled your company to win the award?

We have done a lot of work in liquid effluent control. When we started this unit in 1996, the level of liquid effluent was around 575 cubic metres per day, which has now been brought down to about 400 cubic metres per day. Our target is to become a zero effluent company. Another area where we have worked unceasingly is the lowering of energy consumption and that also has a bearing on the quantity of effluents discharged.

The third area where we have done a lot of work is getting of wealth from waste. During the process of producing caustic soda and chlorine, there is a certain amount of chlorine generated as waste, which has to be fixed. To do that, we went in for a sodium hypochloride

INTERVIEW

S K Agrawal

generation system. Conventional systems use calcium hydroxide to mitigate chlorine and make calcium chloride, a product which does not have any real market value. But when sodium hydroxide is used for chlorine fixation, it yields sodium hypochloride, which is a saleable product. From a level of Rs 50 lakh a year, we have picked up sales to the extent of Rs 2.50 crore per year.

Another area is hydrogen. Conventionally, hydrogen is vented in most of the plants into the atmosphere. In 1997-98, we started compressing hydrogen and sell-

What is the cost-benefit ratio of environment management?

We are generating sales of about Rs 2.50 crore per annum from sodium hypochloride. As far as investments are concerned, no separate expenditure was made. It was a part of the original project cost. A system of this type costs just about Rs 1 crore. On hydrogen, we made an investment of about Rs 1.50 crore and we are generating annual sales of about Rs 3 crore from it. Another scheme which we are implementing is water harvesting, which will be commissioned in the first quarter of the financial year 2002-03. This will help us save about 10,000 cubic metres of water per year and also produce commercial water since water in Bharuch costs Rs 14 per cubic metre.

Samcor Mirrors New Reality

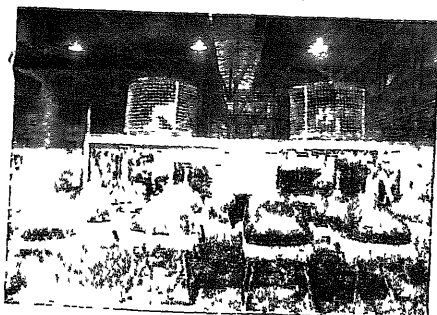
SAMCOR Glass Limited, a Rs 82-crore company which employs nearly 900 people, manufactures glass bulbs and funnels for television Operations at its Kota plant are guided by the company's environmental policy, a facility-specific environmental management system, and a monthly environmental reporting system. Little wonder, the company was ranked second in Category I (companies with annual turnover of less than Rs 100 crore) by the TERI Corporate Environmental Awards 2001.

A technological investment of Rs 1 crore on water treatment plus other expenses incurred on

conducting environmental education and awareness programmes among employees and surrounding villages on pollution control, and on creating water harvesting infrastructure have translated into an improved bottomline for the company—through greater cost efficiencies (as a result of reduced input consumption and waste genera-

tion), longer product life cycles, greater production efficiencies and enhanced corporate image (among suppliers, buyers, employees and locals).

While the Kota plant complies with all the relevant national regulation, in some areas—such as permissible level of bio-chemical oxygen and allowable discharge of treated effluent—the plant actually goes beyond Indian standards and meets global performance standards. Programmes such as reusing batch waste and electrostatic precipitator (ESP) dust along with raw material have set an example for Samcor's collaborators, too.



MSPL Mines Clean Profits

MSPL Limited is the largest private sector iron-ore mining and exports establishment in Karnataka employing 600 people with an annual turnover of Rs 80 crore. It started export operations in 1952 and moved into mining in 1962 and now produces 1.5 million tonnes of iron ore annually.

This ISO 9001 certified company also holds ISO 14001 for its environment conservation efforts. It has undertaken several voluntary initiatives with a corporate environmental policy that lays emphasis on control of pollution caused due to mining activities (mainly air pollution by SPM, RPM, NOx and SOx



which began in 1976, has led to over 12 lakh trees being planted till now, which have helped check soil erosion, improving air quality, providing habitat to local fauna and also improving water storage capacity of the surrounding area.

MSPL also carries out land reclamation and rehabilitation and dump yard stabilisation, adopting biotechnological methods of afforestation for the purpose. It has experienced cost efficiencies, higher product sales, greater worker productivity, and an enhanced corporate image thanks to its eco-friendly practices, resulting in a healthier bottomline.

and suspended waste solids in the storm water draining out of the mining lease area during the monsoons).

MSPL's soil conservation at the Vysanakere iron ore mine has helped it get ranked third in Category I (comprising companies with turnover under Rs 100 crore per annum) at TERI Corporate Environmental Awards 2001.

MSPL's afforestation drive,

'Cost Is A Secondary Consideration'

SAMCOR Glass Limited (SGL) is a member of the Rs 1,100-crore Samcor group, which is India's largest integrated manufacturer of picture tubes for television, display and industrial applications. The Samcor factory is located in Kota (Rajasthan) and spread over 70 acres. Excerpts from an interview with the company managing director Satish Kaura.

What drives your green initiatives?

From the very inception of the Samtel group, we have inculcated in ourselves the values of building a responsible corporation, which cares for the environment and society. Our vision statement also reinforces the same.

What specific initiatives

has Samtel group taken for better environment management?

As a policy, environment management is planned from the conceptualisation stage for all new projects as well as for introducing significant changes in existing operations. The guidelines of ISO 14001 are followed. Samcor acquired the ISO 14001 approval in the year 2000. The company believes in not only complying with the statutory regulations in letter and spirit but works proactively for the continuous conservation of natural resources and pre-

vention of pollution.

How much money does Samtel invest in these initiatives?

A Cost and finances are secondary considerations when it comes to environmental issues. It is difficult to pinpoint the exact investment in these initiatives as they are an integral part of our operating procedure and are routine practices. We have spent large sums in capital investments and also spend large amounts in day to day operations to continuously improve our environmental performance.



INTERVIEW

Satish Kaura

'We Focus On Air Quality Management'

MSPL Limited has been ranked third in Category I by the TERI Corporate Environmental Awards 2001. Excerpts from an interview with the company's general manager, Meda Venkatarah.



INTERVIEW

Meda Venkatarah

What are your thrust areas in environmental management?

Briefly, we focus on air quality management with emphasis on control of fugitive emission and dust, water and waste water management with focus on prevention and control of soil erosion, soil conservation measures through watershed development programme, noise pollution abate-

ment, afforestation of mine lease areas for which MSPL has already planted 1.2 million trees, and through regular training and interactions with our employees.

What kind of environment management system have you adopted?

We have been having environmental management programmes since 1976 and since July 1999 these met the ISO 14001 requirements (the first private sector company in Karnataka). We have introduced the concept of 'environment friends' where the head of each unit is given the full responsibility of

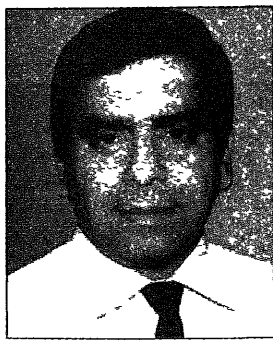
looking after environmental activities in the mine lease area for a particular day in a month.

Are that environment management techniques in India are at par with the international standards?

By and large the techniques and pollution control measures adopted in India are at par with the international standards with few exceptions. For pollutants, ambient air quality standards are not yet fixed. Instead of absolute outlet standards, it is desirable to prescribe percentile limits as targets. Emissions limits should match with the production levels. Most importantly, regulatory agencies should stipulate practical methods for achieving the best of standards.

'Such Awards Are Not New To Us'

THE Rs 320-crore Seshasayee Paper and Boards Ltd, true to its emblem, is a lamp lit in the dark world of industrial pollution and environmental degradation. Little wonder, the company has won the TERI corporate environmental award under Category II (companies with an annual turnover between Rs 100 and Rs 500 crore). Excerpts from an interview with chairman and managing director N Gopalaratnam:



INTERVIEW

N Gopalaratnam

How do you value the TERI award?

Winning national environment conservation awards is not anything new for Seshasayee Paper and Boards. We won the FICCI award in 1993-94 and the State Environmental award in 1995-96 and several similar awards over the years. The awards are a recognition of the integrated environmental management of the company which is known internationally. People from China, Thailand and Indonesia have visited our plant to see how we do it. An academic paper on our conservation methodology has been presented at the United Nations Environment Programme (UNEP).

The bringing together of industry, agriculture, the people and environment into an organic whole to benefit all stakeholders is a unique technology. Seshasayee Paper has shown to the world. The award is another milestone and a landmark in our quest for greater ecological heights.

What is the unique ecological feature of your company?

In one word, it is integration—integration of the input, output, and the players in both. Right from its inception in 1962, we have been using bagasse as its main raw material. Bagasse

is sourced from its own group sugar mill, Ponnai Sugars. Sugarcane is grown by hundreds of farmers. The company too supplies the farmers treated water from its effluent stream. Hence right from the beginning Seshasayee Paper has been a zero effluent company. The key players, the farmers and employees of the company, are highly motivated and committed. The company ensures the availability of safe drinking water to the employees living in the sprawling colony and the local villagers. The company takes key interest in the ecological improvement and sustainability of the entire area.

Has your investment on environmental conservation impacted your balance sheet?

Environmental conservation in itself is a costly affair. We have invested over Rs 25 crore in this. But the investment will pay for itself. The pay back period for investment on energy conservation is less than four years. Environment conservation is a culture of Seshasayee Paper and its rewards are both economic and social. ♦

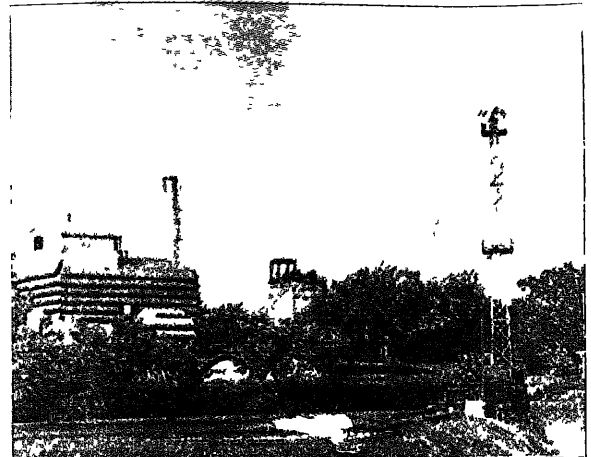


Seshasayee Irrigates Profits From Effluents

SESHASAYEE Paper and Boards (SPB) Ltd has won the TERI corporate environmental award in Category II (companies with turnover between Rs 100 crore and Rs 500 crore). Located at Erode in Tamil Nadu, SPB is a Rs 262.14 crore company, producing 1,15,000 tpa of paper and paper boards of all varieties.

With an environmental policy applicable for both the company and its production facilities, the company has separate environmental cells at both levels. SPB's production facility has an environmental management system in place, monthly reports of which are regularly sent to the Tamil Nadu Pollution Control Board.

And although SPB is not involved in any national and international level environmental initiatives as of now, its good work at the facility level



in areas of water management and agriculture is evident to all.

The company's 'Irrigation With Treated Effluent Project' for pollution prevention is a remarkable success. It was started in 1983 and subsequently expanded in 1989. Higher use of bagasse and

waste paper, utilisation of wood from only man-made plantations, dispensation with use of bamboo, and higher use of bio-fuels and reduced use of ash fuel are some of the other eco-friendly improvements and modifications that the company has made for pollution prevention. ♦

DuPont Makes A Point

EI DuPont India Limited has two wholly owned operating sites, one each at Madurai, Tamil Nadu, and Savli, Gujarat. DuPont's Savli unit has been ranked second in Category II (companies with a turnover between Rs 100 crore and Rs 500 crore) by the TERI Corporate Environmental Awards 2001.

DuPont, Savli, initiated this project to meet the strict water consumption and effluent requirements of the industrial park where its Engineering Polymers (EP) compounding operation for Zytel glass reinforced (GRZ) production is located. A redesigned vacuum extraction system for the Zytel GRZ process helped



improve the condensation/knock out system. In addition, with a new overall site water effluent management system, the total water consumption has been reduced by more than 99.5 per cent, resulting in a yearly saving of up to Rs 2,40,000. Of about 70 process lines operating globally, this is the first one to successfully adopt a design that essentially eliminates water consumption.

This new system is going to be adopted in other DuPont operations worldwide, but in phases.

The organisation has already been certified for Environmental Management (ISO 14001, 1996) by Lloyd's Registry Quality Assurance. Apart from its environmental endeavours, DuPont, Savli, has been a major contributor towards community development in the village of Manjusar. It has been constantly engaged in promoting education amongst the rural population by way of improving the infrastructure of schools, providing students with scholarships and encouraging teachers with best teachers awards. ♦

Environmental Orientation

ORIENT Paper Mills (OPM) is a Madhya Pradesh-based company, which manufactures different varieties of paper. With an annual turnover of Rs 201 crore and a total of 2,946 employees, its annual production of paper is to the tune of 72,740 mt. This is a company that has been delivering not only quality products, but also has committed itself to sustainable development. The company not only complies with national environmental legislations, but has also taken up several voluntary initiatives. The company has been ranked third in Category II (companies with an annual turnover between Rs 100 crore and Rs 500 crore) by the TERI Corporate Environmental Awards 2001.

An environmental policy guides its economic decision making and business operations while an environment cell helps in the execution of the same. The cell also undertakes regulatory reporting at the company and facility level, in conjunction with an inhouse environmental management system which is in place at its Amli plant. Initiating a forestry programme in

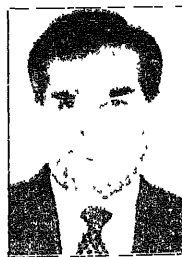
An environmental policy guides the firm's economic decision making and business operations

the local area, conducting awareness and training programmes for environment protection, utilising appropriate technologies to minimise pollution, recycling waste in an environment-friendly manner and continual review of the company's environmental performance are some of the steps taken by the company to promote sustainable development.

Going beyond displaying concern for the environment, OPM has also taken up the cause of its immediate neighbourhood such as road construction, cleaning of drinking water pipelines, construction of sand bunds, supply of building materials for a local temple, deepening of existing wells and carrying out of boring work for new wells. ♦

'We Focus On Zero Emissions And Waste'

THE last 200 years has seen DuPont transform itself from a chemicals company to a science and technology company, encompassing the traditional sciences of chemistry and engineering as well as the newer sciences of electronics and technology.



INTERVIEW

Pankaj Shah

Excerpts from an interview with President (Paul) H Shah, Asia, DuPont, South

What specific management initiatives have been taken by DuPont?

DuPont adopts a Reduce-Operate practice in every

country it operates in, and complies with all local laws as well as our own safety, quality and environment-related guidelines.

All the DuPont manufacturing facilities in India are built to world-class standards and have received the 'Quality Management System' ISO 9002 and ISO 14001 certification. The Engineering Polymers site at Savli is among the 12 global establishments selected to receive the DuPont 2001 Sustainable Growth Excellence Award for creating safety, health, and environmental value, along with creating societal and shareholder value.

What are the driving principles behind your environmental management?

DuPont adheres to environmental management practices that allow us to place our facilities in any country on the globe. Those technologies continue to evolve as new technology becomes available. In all cases around the world, we focus on two principles: waste reduction in the process, and zero emissions and wastes. This is our corporate goal.

How much money does DuPont spend on this every year?

In general, about 15 to 20 per cent of the capital investment in each location is utilised for environmental protection. ♦

'We Owe Clean Environment To The Future'

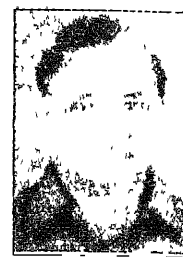
The Orient Paper Mills has been ranked third in Category II (companies with turnover between Rs 100 crore and Rs 500 crore) by the TERI Corporate Environmental Awards 2001. Excerpts from an interview with N K Thusu, the president (Operations) of Orient Paper Mills.

What is it that drives your green initiatives?

We are committed to preserving and enriching the environment in order to attain sustainable development, which is the driving force in all our decision making. We strongly believe that we have not inherited our environment from our forefathers but borrowed it from the generations to come and, therefore, owe them a better and cleaner environment.

What are the measures you have taken to become environment friendly?

Our philosophy to control pollution has been to minimise the generation of pollutants first and then to treat them. We have continuously increased the raw material yield and made operations more efficient, thus reducing the consumption of raw material, coal, energy and water per ton of the produce.



INTERVIEW

N K Thusu

How does environment management in India compare with that of the rest of the world?

Although the environ-

mental management systems in India are at par with the international standards in units that have been certified ISO 14001, the effective environmental management techniques and pollution control measures still lag behind the advanced countries. The Indian industry by and large is not in a position to adopt the stringent standards of advanced countries mainly due to inability to use state-of-the-art technology. It may be noted that upgradation of technology is highly capital intensive which we are not yet capable of dealing with due to many constraints. ♦

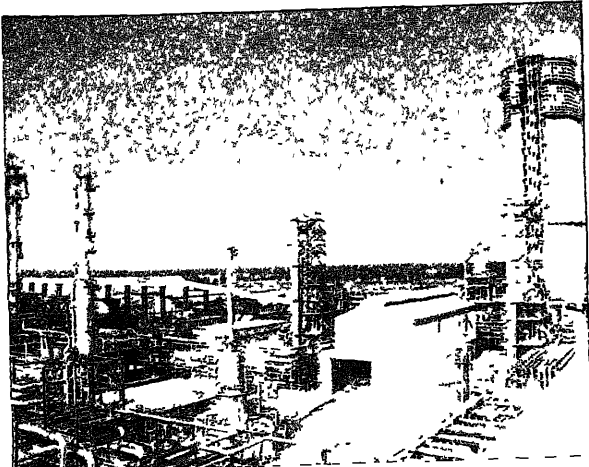


IFFCO Nurtures Seeds Of Sustainability

IT'S not for nothing that the Phulpur plant of Indian Farmers Fertiliser Co-operative Ltd (IFFCO) has won the award in Category III (companies with an annual turnover above Rs 500 crore) of TERI Corporate Environmental Awards 2001. IFFCO practises a strong environment policy, both at the company level and the factory level in all four fertiliser plants—two each in Gujarat and Uttar Pradesh.

At its Phulpur plant, where it manufactures urea, the company set up a total effluent recycle/reuse and zero liquid effluent discharge project in 1995. It has also been awarded ISO 14001 certification. On the whole, IFFCO's Phulpur plant has set examples for others to follow.

The implementation of water treatment plants, utilisation of coal ash for use



land reclamation and for manufacturing flyash bricks and portland cement, total recycle of effluents through reverse osmosis effluent treatment plants, implementation of Integrated Rural Development Project, plantation of nearly three lakh trees

under a green belt development project, environmental awareness and training programme for IFFCO township residents and surrounding villagers have all added directly or indirectly to the bottomline of the company.

'Prevention is better than cure'

THE Indian Farmers Fertiliser Cooperative managing director, U S Awasthi spoke to The Financial Express on the pollution control efforts undertaken by the company. Excerpts

What is IFFCO's philosophy on environment protection?

Prevention is better than cure is the buzzword of our pollution control programme and we have adopted zero pollution technology. Energy conservation, safety and, last but not the least, excellence in environment protection and pollution control are the major areas of concern. For this, we have adopted cleaner technologies and recycling of wastes.

How do you react to the achievements of the plant in environment protection?

When we initiated the programme in 2000, we never thought we could achieve excellence in such a short span of time, but credit goes to my colleagues who have made this possible. Today, the Phulpur plant has laboratories that have state-of-the-art instruments for analysis and sensors have been installed at strategic



INTERVIEW

U S Awasthi

points to do online monitoring of the ambient air quality. The microprocessor based control system maintains the process parameters so that the plant is operated very close to design conditions. These are all results of teamwork.

What are the specific steps which the plant has taken up to ensure a better environment?

The measures taken up include reuse of steam condensate, process condensate and flash tank condensate. A greater emphasis is also on the non-planned

environment management such as development of green belt, domestic sewage treatment and utilisation of treated sewage for horticulture and farming, segregation and recycling of biodegradable and non-biodegradable wastes, environmental awareness programmes.

Please specify some of the innovative initiatives that you have undertaken?

The most notable scheme that we have implemented is on water conservation. The measures include re-using/recycling various effluent streams. This has reduced the fresh water consumption tremendously. Various schemes that are implemented to achieve this include cooling tower blow-down reduction and reuse of steam condensate from urea plant, processing condensate and steam condensate from ammonia plant, inserting gas plant effluent into water softening plant, jacket cooling water of ammonia plant into cooling tower as makeup, utilisation of treated sewage water into water softening plant, treating effluent for operation of power plant and irrigation.

Harihar Sets High Standards

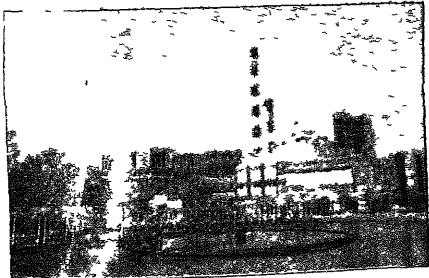
HARIHAR Poly Fibres, a rayon grade pulp plant belonging to Grasim Industries, is a mill widely seen as one of the cleanest in India. The company was ranked second in Category III (companies with an annual turnover of more than Rs 500 crore) by the TERI Corporate Environmental Awards 2001.

Situated on the banks of river Tungabhadra in South India, some five hours drive from Bangalore, the mill is a part of the Aditya Birla Group. The unit has a turnover of Rs 150 crore. It employs some 1,670 people and produces 70,000 tonnes of rayon grade pulp per annum. But the

company is not just about numbers. It has a very well defined environmental policy. In fact, it has an environmental cell both at the company and the facility levels. A separate environmental department at facility level is headed by a deputy general manager (production) guiding a team of environmental, chemical and mechanical engineers and

other plant operating personnel. The environment department is supported by the technical cell, safety department as well as quality systems. To integrate environmental management practices with that of other plant activities, the environmental department is represented by the manager in the monthly progress review and daily coordination meeting.

Given its green record, little wonder that Harihar Poly Fibres received the ICMA (Indian Chemical Manufacturers' Association) Award for environmental control strategies and safety in chemical plants in 1991.



'We Have Taken Many Anti-Pollution Steps'

HARIHAR Poly Fibres, a unit of Grasim Industries Ltd, was set up in 1972. The plant produces 70,000 TPA Rayon grade pulp. Rayon grade wood pulp is the basic raw material used in the manufacture of viscose staple fibre. Production of rayon grade pulp with totally indigenous resources was a great stride towards import substitution, saving enormous amounts of foreign exchange. Excerpts from an interview with the senior executive president of Harihar Poly Fibres, S S Maru. Excerpt:

What steps has your establishment taken to check pollution?

We have taken several steps to control pollution to create an environmentally clean industry.

since the inception of the mill in 1972. During the last 10 years alone, 146 projects were implemented in this area and I don't think it is possible to give entire details of each of these projects. The steps implemented over the years have helped in bringing down chemical consumption by 52 per cent, energy purchase by 41 per cent and reduction in effluent generation by 35 per cent.

A key element has been the modernisation of the manufacturing process with clean production practices to minimise

generation of waste at the source itself.

What was the expenditure incurred by the company to set up such measures?

The implementation of these measures cost us Rs 39.02 crore over the years. But we do not treat this as an expenditure as we could get a saving of Rs 14.30 crore per annum by way of reducing chemical inputs, energy consumption, and

improved productivity. Moreover we could exercise full control on pollution generation.



INTERVIEW

S S Maru

Ambuja Cements New Image

WE are environmentally conscious. The motto is followed in letter and spirit by Gujarat Ambuja Cements (GAC) Limited. The company's unit at Solan, Himachal Pradesh, has been ranked third in Category III (companies with turnover above Rs 500 crore per annum) by the TERI Corporate Environmental Awards 2001.

GAC has a stated environment policy in place. The environmental cell/department is present both at the facility level as well as at the corporate level. Further, at the facility level, environmental management division (EMD) and health and safety departments are separate units. But they are headed by a single depart-



ment at the corporate level. The company also engages in environmental reporting.

The cement plant at Solan is located in an area that is low in agricultural value. This unit has undertaken a number of

pollution prevention measures. The company says that in the cement industry maximum attention has been concentrated on air pollution. The company is guided by the maxim 'Better environment means better profits'.

Its energy conservation efforts have led to a cost saving of around Rs 80 lakh per year. Other cement majors have followed in its footsteps by installing glass bag houses for controlling emission from stacks, using surface miners and rock breakers, covering all the storage areas and eco-restoration of mined out land.

Evidently, GAC, Solan is a potential model for business community because the company has demonstrated programme commitment.

'Our Emission Levels Are The lowest'

GUJARAT Ambuja Cements Limited claims to meet emission norms which better international standards. The company has been ranked third in Category III by the TERI Corporate Environmental Awards 2001. Excerpts from an interview with the company chairman, Suresh Neotia.



INTERVIEW

Suresh Neotia

What is your company's corporate philosophy on environment?

The company adopted a comprehensive policy on environment right from the beginning. Even when we set up our first plant in

Gujarat, we won a national award in 1992 on pollution control and environment instituted by the Central government. Our emission levels at all the plants are lower than the lowest international standards. The cost of environmental protection is about 10-15 per cent of

the total capital cost of setting up a plant. But we don't think it is a capital cost that does not yield result. It is commercially viable because the emission and particles are ploughed back into the system which raises productivity. So it is not purely a philanthropic cause.

How much money does Gujarat Ambuja spend on environment management and for discharging its corporate citizenship responsibility?

The money spent has been growing each year since the size of the company has also been growing. We sometimes also receive cross funding from other bodies like Central government for watershed development and for certain projects from Tata Foundation and CARE. Directly, we disburse about Rs 4-5 crore on environment, community development, education and health. The major part is maintenance of back filters, silencers and environment engineers and managers. All this is in addition to the 10-15% figure quoted earlier.

7 MAR 2002

India's first bio-fertilizer hits market

In what promises to revolutionize agricultural practices in the country as also save millions of rupees to the exchequer, a new phosphorus supplementing mycorrhiza-based bio-fertilizer has been introduced in the market.

Called Ecorrhiza, the bio-fertilizer developed by the scientists of Tata Energy Research Institute (TERI) with support from the department of Bio-technology, has proved its efficacy in reclaiming wastelands and increasing production yields by about three to 15%.

According to Dr Alok Adholeya,

TERI, and convenor of the Mycorrhiza research for the last 16 years, "this low cost bio-fertilizer will now directly reach farmers, agriculturists, florists and flower growers".

They will stand to save the investments made on the expensive phosphatic fertilizers, the price of which has gone up and are next only to the most expensive potash based fertilizers.

According to Dr S Natesh, Advisor, Department of Biotechnology, the cost of using ecorrhiza comes up to Rs 200 per acre depending on

the plant harvested.

At present India is a demand-supply gap of 1.4 million tonnes for phosphatic fertilizers. "If ecorrhiza could make up for only 30% of the deficit it would save the country up to 360 million US dollars," he says.

With excessive use of chemical fertilizers having proved to be unsustainable, the thrust is now again on organic and bio-fertilizers which do not lead to soil depletion over a time period.

Mycorrhiza, a term used for association of roots of land plants absorb nutrients from the soil, and are

specially advantageous in dry and poor soils also. They represent those organisms that hasten the intake of phosphorous.

A single species of Mycorrhiza is capable of colonising 80 per cent of land plants and also offers resistance against parasites.

Conventional production of Mycorrhizal bio-fertilizer is carried out in soil. This has the disadvantage of carrying harmful pathogens, and the purity of the fertilizer cannot be ensured.

Ecorrhiza, in comparison, is produced on an artificial medium and

hence contains 100% pure culture without any contaminating organisms. It is the first of its kind in the world and represents a new generation technology costing just Rs 200 per acre.

The technology for mass production of ecorrhiza, developed by TERI, guarantees assured purity and quality and has a shelf life of five years at room temperature," says Dr Natesh adding that so far two companies have been given the license to produce the bio-fertilizer.

According to TERI, Ecorrhiza will be produced by KCP industries

and Cadila and soon will be marketed across the country.

According to Dr Adholeya, research on Mycorrhiza was initiated in 1986. Through the application of Mycorrhiza, TERI has changed the degraded landscape of Gual Pahari, in Gurgaon district into a welcome patch of green.

It has constructed a lush green cricket round where first class matches are held regularly. Before embarking on commercial production, two major demonstrations of fly ash reclamation have been successfully established in Badarpur (Delhi) and Korba (Chhattishgarh).

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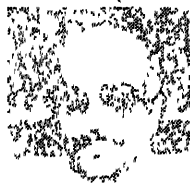
TERI workshop on solar energy

GUWAHATI, March 21. The Tata Energy Research Institute, (TERI) North Eastern Regional Centre organized a Regional Workshop on Solar and Low Energy Architecture during March 13 to March 15 at Hotel Brahmaputra Ashok, Guwahati. The workshop was sponsored by the Ministry of Non Conventional Energy Sources, HUDCO, and Vinay Cements Ltd, stated a press release. The inaugural session was presided over by Mr A K Barua, Director, Assam Science Technology & Environment Council. With the participation of the participants Mr Debajit Barua, Chairman, Assam Science Technology & Environment Council, said that TERI is organizing the workshop to create awareness among the architects and engineers about energy efficient building designs by optimum use of available solar energy and also to train the participants in the application of solar and low energy architectural concepts. Ms Mili Mazumdar, Fellow TERI gave an overview of the various activities of TERI. Mr P K Barua, Regional Chief, HUDCO also spoke on the occasion. The workshop was attended by more than 35 participants comprising of architects, civil engineers, teachers and students technical session.



Conference on
Renewable Energy:
New Approaches and Directions

Inauguration by



Shri M. Kannappan

Hon'ble Minister of State (Independent Charge)
Ministry of Non-Conventional Energy Sources

Date: 22nd March, 2002

Time: 10.00 A.M

Venue: Federation House, Tansen Marg, New Delhi

— **Key Speakers** —

- Shri P.K. Mohanty*, Principal Advisor, Energy, Planning Commission
- Shri S. Chandrasekhar, Managing Director, Bhoruka Power Corp. Ltd.
- Shri Rakesh Bhakshi, Chairman, RRB Consultants & Engineers Pvt. Ltd.
- Dr. P. Venkata Ramana, GEF, UNDP

— **Presentations** —

- Suzlon Energy Ltd ● Tata Energy Research Institute
- Indo Canadian Consultancy Services
- Winrock International Ltd ● EDL India Pvt. Ltd.

For registration please contact.

Dr. Aditya Trivedi, Joint Secretary,

Federation of Indian Chambers of Commerce and Industry

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FREE LANCING TO INDIA

BOMBAY

9 MAR 2002

'Budget ignores role of inefficient vehicles play'

NEW DELHI THE Union budget 2002-03 has mostly ignored the role of inefficient vehicles play in increasing the pollution levels by continuing with a uniform excise duty structure for all motor vehicles, Tata Energy Research Institute (TERI) said, reports PTI

"As in the case of fuels, the taxation regime of vehicles appears to be independent of the efficiency and emission performance of various automobile technologies as it does not provide for any disincentive for polluting vehicles,"

TERI said. "The current norms," RK Pachauri, Director, TERI, said. While rationalisation of excise duty structure is important, it is also essential to recognise the differential impact of various technologies and alternatives on the environment, Pachauri said

Emissions and Commissions

The Kyoto Protocol's guidelines to help tackle problems of depleting energy resources and deteriorating air quality included the option to trade in emission credits between more-polluting and less-polluting countries/companies, so that cleaner technology could be developed even while continuing with normal economic activity **Andrei Marcu**, executive director, Emissions Trading Association (ETA), Geneva, was in New Delhi to participate in a Tata Energy Research Institute (TERI) workshop on sustainable development. He tells **Narayan Ganesh** that because of poor public awareness on emissions trading, there is a need to "market the market"

What is emissions trading all about?

The Kyoto Protocol's guidelines state that a country with an excess of emission units can sell its credits to another country that is unable to meet its commitments. The KP has set targets for the period 2008-2012 to limit greenhouse gas emissions globally, to bring emission levels to minus five per cent of the 1990 levels.

The KP is a country agreement. Member-countries have to restrict emissions to a certain level — if not, then trading is not allowed. You can, however, buy emission rights from others who have a surplus. Under the authority of a country, individual companies can trade. Canada, for instance, can take stock of its own emissions quota and then assign this quota — through some process that's not determined yet, since the issue is a very politically charged one — to different sectors and companies in those sectors. A company that needs more than its allotted quota of emission rights can buy these credits from another country that can spare some on payment.

But if trading in emission rights (ERs) goes on like this, how will global emission levels be brought down?

Target levels state that emissions should go down to minus five per cent when compared to 1990 levels before 2012. So all the trading has to work within that cap. The Kyoto Protocol has taken the aggregate and apportioned it to different countries. However, although out of some 180 countries only 84 have signed the Protocol, hardly 25 have ratified it. *How will the Protocol work if most countries are not part of it?* US president George Bush has dismissed it as being "totally flawed" and has proposed his own alternative to deal with climate change.

In order for the KP to work, a certain arithmetic has to be in force. Essentially, if the European Union ratifies it as also Japan, Canada and Russia, the KP will go into force

even if the US remains outside the Protocol. The political statements coming out of Ottawa, Brussels and Tokyo indicate strongly that all these countries are going to ratify the KP as a strategy, even without US involvement.

The US is the world's largest polluter. But Washington has made it clear that it will not go along with the KP. Germany and the UK have done well in reining in polluting emissions. They haven't traded much — their efforts are directed more at domestic controls. Once the KP is ratified, there will be detailed chalking out of measuring tools, methods and plans of action. For starters, the cap is up to 2012. The European Commission has said that the EU countries would impose internal caps on emissions within the EU in a three-year timeframe. They're working frantically towards achieving this.

What is the role of the International Emissions Trading Association in all this?

The IETA is a non-profit association registered in Switzerland. We have 45 large members, like Shell, all companies from the private sector. We're also talking to some companies based in India. Our association

The KP connects country trade — but how do you connect industry trade? We want to come to places like India, Indonesia and Brazil — help the businesses in these places create their own business associations for this by providing material, and knowledge tools.

Who do your 45 members buy their emission rights from?

First, there's not a lot of stuff being traded — there's a stilted amount of trade that's happening. What people are mainly preoccupied with now is with creation of the rules — they are companies that are engaged in a certain amount of trade with projects in Brazil, Uganda and Eastern Europe. So they're doing as much ER trading as they can. They're also trading among themselves in a developed country.

Our job is to make available the knowledge, to make businesses aware. There are probably about 60-odd companies in the world who are trading directly in emission rights dynamically. Otherwise, there are brokerage houses who help facilitate such trading. There's the Oregon Carbon Trust. The state of Oregon had declared at the state level that any new power generation and emission of CO₂ has to be offset

by some kind of reduction of carbon — through carbon sinks, energy efficiency or any other method. They've created a carbon fund and they go out and buy ERs — either directly or through brokers.

So trading in ERs will be allowed only till the year 2012?

Well, this is the first step, targeting for a minus five per cent reduction in 1990 global emission levels. In 2005,

there could be negotiations for a second period of caps — this is going to be a difficult and arduous political decision.

Countries like the US are putting cost of production and economic growth before cost to environment and health. Isn't this unfair to others like the EU countries who are making a conscious effort to slash domestic emissions despite the economic price?

This is a purely political question and these issues are still being discussed. On the other hand, private companies like Shell do internal trading — they've made a purely voluntary commitment for carbon reduction towards fulfilling the KP target of reducing emission levels by 2012. By doing so, they've realised they've actually become more efficient and they have risen in consumer esteem. They eventually make much more money than what they invested in going green. So many US-based companies are more proactive in this than the US government is.



Uday Shankar

"Private companies like Shell have made a voluntary commitment for carbon reduction. They've become more efficient and risen in consumer esteem. They eventually make much more money than what they invested in going green."

is exploring what we call market-to-market. Emissions trading is a new market — people are not familiar with the concept. Outside of a few large western companies, awareness is poor. Also, there are no resources to dedicate to creating this awareness. Business communities in both the developed and developing world should be made more aware of the effects of releasing too much of greenhouse gases into the atmosphere.

We're not brokers. Our function is to try and set standards for the industry from a financial point of view. How do you account for these credits, do you capitalise them, do you depreciate them since these are environmental financial instruments, what should the tax treatment be of these things, how to go about the contract details, and so on. The verification and monitoring of KP guidelines are all very technical issues. These need to be standardised across industry.

You have a number of national trading schemes all over the world

R K PACHAURI

As Per People's Expectations



I am happy that Mr Sinha has taken reforms further ahead as promised in his last Budget. There are no surprises this

year, and this is as per the people's expectations. I welcome the initiative taken by Mr Sinha on opening up the agricultural sector and effort has been made by him especially on deregulating fertiliser sector in a phased manner, said Dr Pachauri.

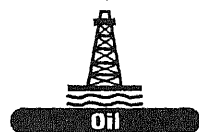
I think the government should not stop here and digress feet for ever in finalising the new pricing policy for urea, the most-consumed fertiliser, which the government had to import in order to meet its domestic requirement. Dismantling of Administered Price Mechanism (APM) in the petroleum sector is step in the right direction and would leave pricing of petroleum products to be determined by market forces.

Consequently, the price of diesel will come down by around 50 paise per litre and petrol by Rs one per litre, and create more competitive environment in the sector providing further relief to the Indian economy.

*Dr R K Pachauri is
director general, Teri*

Doubling Of Cess On Domestic Crude To Fetch Rs 5,000 Cr Annually

OUR INFRASTRUCTURE BUREAU
New Delhi, Feb 28



Finance minister Yashwant Sinha, in the Budget for 2002-03, has

announced doubling of cess on domestic crude oil production to Rs 1,800 per tonne from the existing Rs 900 per tonne. This move is expected to fetch the government over Rs 5,000 crore annually.

Along with the doubling of cess on domestic crude oil, Sinha has also proposed to levy a Rs 6 per litre cess on petrol. But the consumers, who would have otherwise gained more in terms of the reduction in prices of petroleum products, have not been passed on the benefits of freeing of the petroleum sector from the price shackles. This is clear from the marginal reduction in prices of diesel and petrol by around 50 paise per litre and Re 1 per litre, respectively.

According to analysts both these moves are aimed at generating additional revenues for a smooth transition from a controlled regime to a deregulated one. Some, however, say that this is not a healthy move as it will directly hit the investment plans of national oil companies, like the Oil and Natural Gas Corporation (ONGC) and Oil India Limited (OIL).

Both ONGC and OIL together produce around 32 million tonnes of crude annually and were expecting to get import parity price for their crude after the dismantling of the administered pricing mechanism (APM) from April 1 this year.

However, with an additional cess on crude at the rate of Rs 900 per tonne, ONGC will have to shell out an additional Rs 200 crore per month amounting to Rs 2,400 crore annually. Overall, it will have to dish out around Rs 4,800 crore annually after a cess of Rs 1,800 per tonne is imposed on crude oil

production.

"Instead of taxing the oil companies, the government should have looked at ways of reducing government expenditure.

There have been no strong measures in that direction", said director-general, Tata Energy Research Institute (TERI), R K Pachauri.

A detailed look at the duty rationalisation clearly shows that while in case of petrol the finance minister has lowered the excise duty from 90 to 32 per cent, he has at the same time mopped up part of the lost revenue through a cess of Rs 6 per litre.

The surcharge on petrol blended with 5 per cent ethanol would be Rs 5.25 per litre. While the customs duty on kerosene for the public distribution system has been doubled to 10 per cent, that for kerosene for the parallel marketing system has been reduced from 35 to 20 per cent. Mr Sinha has also announced reduction in excise duty on diesel from 20 per

cent to 16 per cent.

"Since the subsidy burden (of kerosene and LPG) will be borne by the Union Budget from next year, the taxation measures have been designed to raise the required resources," sources said.

Excise duty on petrol and diesel would be 32 and 16 per cent, respectively, while customs duty continues to be at 10 per cent. Both petrol and diesel would be given import parity from April 1, but Mr Sinha has not passed on the entire benefit of linking the prices to subdued international crude oil prices.

The prices of both diesel and petrol are at present higher than the import parity price to provide for subsidies for kerosene and LPG.

Mr Sinha also announced that all the four refineries in the North-East - Numaligarh, Digboi, Guwahati and BRPL — would pay duty at the rate of 50 per cent of the normal rate. Freight subsidies

would continue to be provided for LPG and kerosene to far-flung areas.

The pricing of petroleum products would be market-determined upon dismantling of the APM from April 1, 2002.

Private companies who have invested or propose to invest Rs 2,000 crore in oil exploration, refining, pipelines and terminals would be permitted to distribution of transportation fuels — petrol, diesel and jet fuel (aviation turbine fuel).

The Oil Pool Account will be dismantled on April 1, 2002 and the outstanding balances will be liquidated by issue of oil bonds to the oil companies concerned.

A petroleum regulatory board would be set up to oversee the sector. A budgetary provision of Rs 4,495.80 crore subsidy on LPG and kerosene for PDS while freight subsidy for far-flung areas would entail an outlay of Rs 239.14 crore.

Oil De-Control: Giving With The Right Hand, Taking Away With The Left

ANUPAMA AIRY & SANTOSH TIWARY
New Delhi, Feb 28

The finance minister has undoubtedly made a smart move by levying a Rs 6 per litre cess on petrol to cross subsidise PDS kerosene and domestic gas (LPG).

While reducing the excise duty on petrol from 90 per cent to 32 per cent, Mr Sinha has ensured that there is no net revenue loss on account of this reduction as he has balanced the same by the Rs 6 per litre cess on petrol.

According to senior finance ministry officials, this new cess of Rs 6 per litre on petrol is expected to fetch an additional Rs 6,000

crore. The cess of Rs 6 per litre is not a fixed one as it may be altered with the movement of crude oil prices in the international markets.

Sources said the finance ministry, by way of levying excise duty on petroleum products, generates around Rs 20,000 crore annually. With the imposition of Rs 6 a litre of cess on petrol, another Rs 6,000 crore will be generated.

However, the net excise inflow to centre from oil sector in the next fiscal will go down marginally as Rs 6,495 crore has been pegged as the burden on account of subsidies on LPG and kerosene for

2002-03.

It may be recalled that the finance ministry, via a notification issued in January this year had increased the excise duty on petrol from 32 per cent to 90 per cent and that on diesel from 16 per cent to 20 per cent. This exercise was to generate an additional Rs 1500 crore in the two and a half month period ending February 28, 2002.

This notification ceases to exist from March 1, 2002. However the finance ministry by putting a new cess of Rs 6 per litre has ensured that the excise duty collection yields the same revenue as before—around Rs 6,495 crore annually.

gr 20

Check your green quotient with the participants at TerraQuiz. What's the green word?

The GREEN Olympiad culminates into TERRAQUIZ every year, a 13-episode environment quiz programme for school students. The top 32 schools (two students per school) are selected to take part in this national environment quiz.

Hero Honda Motors Ltd has constituted the Hero Honda Environment Ambassadors Award for the finalists of TERRAQUIZ, while the MoEF has instituted participation scholarships for all the 64 students.

Want to know more? Watch TerraQuiz , telecast Saturday, 6 pm, on Doordarshan's National Network.

Petroleum sector in suspense over lifting of curbs

NEW DELHI

WILL THE price of petrol and diesel come down or go up from April? This is the main concern of Indian consumers as the government traverses the last 45 days to lifting the curbs on petroleum products marketing

On February 28, the federal budget for 2002-03 will end the uncertainty on a host of issues linked with government plans to lift the curbs on petroleum products marketing and pricing on April 1

The petroleum and finance ministries have been holding marathon sessions trying to work out the issue of managing the burden of subsidy to be continued on the cooking fuels

The new budget would unveil how the burden of 33.3 per cent subsidy on kerosene and 15 per cent on liquid petroleum gas (LPG) cylinders would be handled

Currently, though the subsidy on kerosene is just a little over the desired 33.3 per cent, consumers are enjoying a subsidy of over Rs 80 per cooking gas cylinder.

"The dismantling of the administrative price mechanism will definitely come through despite the hitches, with the cabinet having given its approval," KK Nohria, president of Associated Chambers of Commerce and Industry (Assocham), said

The complicated mechanism of subsidy on kerosene and cooking gas has rested all these years on the government maintaining a higher price of petrol and diesel

The price of petrol and diesel, which had remained unchanged for two years during which global crude oil prices rose to over \$30 per barrel and subsequently dipped under \$20, were reduced in January in a surprise move though the government raised the excise duty.

The price of petrol was reduced by more than a rupee per litre across the country, though the excise duty was raised from 32 per cent to a high 90 per cent. Similarly, diesel prices came down by 5 to 8 paise though the excise duty was hiked from 16 per cent to 20 per cent. Despite the drop in petrol prices, there is still room for the price to come down by at least Rs 5 per litre in parity with landed cost of imported petrol, say industry officials

"The expectations are that consumers will stand to benefit once the curbs are lifted and the market forces determine the price of petroleum products," said Nohria

Ardendhu Sen, energy expert at Tata Energy Research Institute, said, "It would take at least another year or so for the competition to arrive and have an impact on the retail prices

"Right now the expectations are that diesel price may go up in parity with import price, while the government would keep petrol price higher for revenue purpose "

The petrol prices would continue to be under government control while the subsidy on kerosene and cooking gas remains, say experts, as the government plans to phase out the subsidy only in five years

If the hiked excise duty were scaled down, some other duty is likely to take its place to manage the subsidy burden, said official sources

A higher tax is mooted on petroleum products or on the oil and gas production of companies like the state-run Oil and Natural Gas Corporation (ONGC), which accounts for over one-third of India's domestic production of oil and gas

Currently state-owned oil companies engaged in production activities get only 80 per cent of the international price of crude. But after the marketing curbs are lifted they hope to get full market rates. So far state-run refiners Indian Oil Corporation (IOC), Bharat Petroleum Corporation (BPCL) and Hindustan Petroleum Corporation (HPCL) as well as state-run oil retailing firm IBP Co., which has recently been taken over by IOC, virtually had the marketing field to themselves

Now several other companies, including multinationals, are waiting in the wings to enter the Indian petroleum products marketing sector. The condition for the entry of private players includes a proposal to invest Rs 200 billion in the hydrocarbon sector in the next 10 years

With the government having completed the disinvestment of IBP Co., there is considerable interest in the government proposal for a similar strategic disinvestment in BPCL and HPCL

"If the stake this time is sold to a private company, only then can we hope to see competition soon, or else it would take at least two years before consumers can hope to see market driven forces determining prices of petroleum products," said Sen

'Corporate sector must have role in eco development'

Our Bureau
NEW DELHI, Feb 7

INDIA is willing to play its role in accordance with the United Nations Framework Convention on Climate Change and the Kyoto Protocol, Mr. Baalu, Minister for Environment and Forests said.

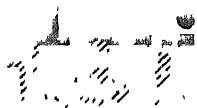
He was inaugurating the two-day conference on 'Green 2002, Agenda for industry', organised by the Federation of Industries of Commerce and Industry (FICCI), TERI Global and the Ministry of Environment and Forests.

"In today's world, it is not possible to look at environmental problems without the active involvement of the corporate sector as it happens to be one of the key stakeholders," the Minister said. The Marrakesh Accord creates opportunities for participation of the corporate sector, especially through the Clean Development Mechanism.

Mr Baalu said that industry while being competitive should also recognise environment as one of the highest corporate priorities and consider it as a key determinant to sustainable development. It was no longer possible to talk about development without looking at close link with environment, he said.

The Minister said that in tune with the changing times, business must make efforts to move in the direction of sustainable development deeming it as an integral part of their corporate goal and re-orient the practices so that the processes and products help conserve energy and resources along with economic benefits.

Mr Baalu also disclosed that India would be hosting the eighth conference of the parties to the United Nations Framework Convention on Climate Change in October-November this year. "It is just an expression of the seriousness with which we look at the environmental problems," he said.



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BUSINESS LINE

23 FEB 2002

'Corporate sector must have role in eco development'

Our Bureau
NFW DPLIH, Feb 7

INDIA is willing to play its role in accordance with the United Nations Framework Convention on Climate Change and the Kyoto Protocol, Mr TR Baalu, Union Minister for Environment and Forests, said.

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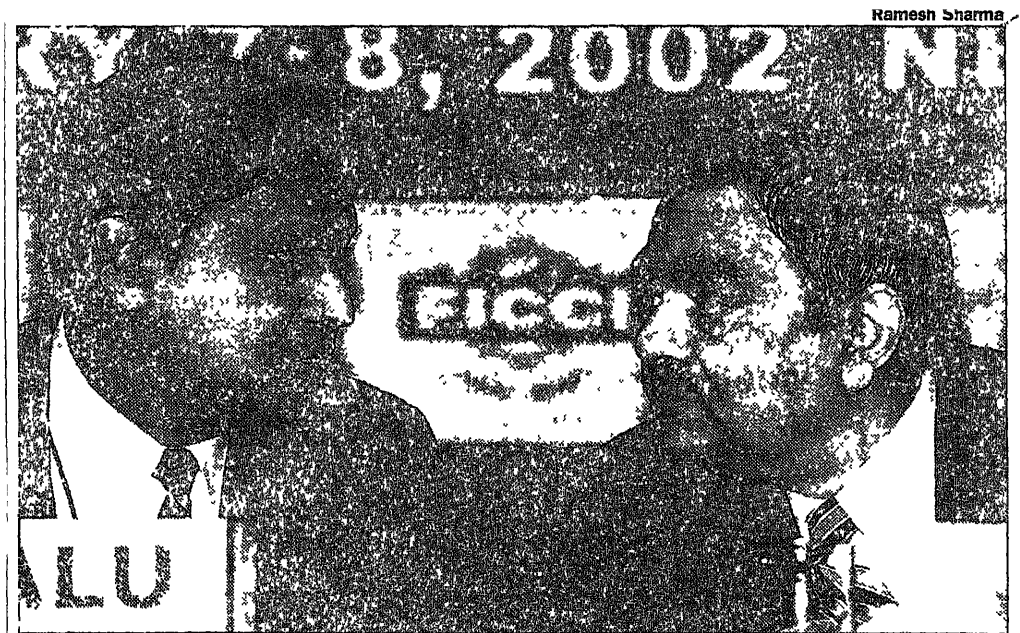
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Ramesh Sharma



The Minister for Environment and Forests, Mr TR. Baalu (left), having a word with Mr R S. Lodha, President of FICCI, at the second FICCI-TERI Global conference in New Delhi on Thursday

WS



The Minister for Environment and Forests, Mr T.R. Baalu (left), having a word with Mr R.S. Lodha, President of FICCI, at the second FICCI-TERI Global conference in New Delhi on Thursday.

BATTLE ON FOR GREEN AMBASSADORS

It's back, and this time on TV! Watch TERRAQUIZ, India's first television quiz show on the environment for the middle level schools across continents, every Saturday at 6 pm on Doordarshan's National Network. Having started from January 26, TERRAQUIZ is a 13-edition TV quiz programme where 64 top performing students at the GREEN OPLMYPIAD 2001, will compete for the Hero Honda Environment Ambassadors.

GREEN OLYMPIAD 2001 was India's first test on environment related issues, and saw participation from 60,000 students from 2,500 schools. The exam is now a global event with Russia, the UAE and Nepal becoming popular centres.

The Green Olympiad and TERRAQUIZ are part of TERI's annual efforts to sensitise teachers, parents and students on issues of environment. Now in their third year, these efforts are supported by Hero Honda Motors (India) Ltd, the Kendriya Vidyalaya Sangathan and the Ministry of Environment and Forests.

Watch students pit their green forces and write in to Green Ambassador, *HT School Times*, with your comments and suggestions.

Power panel seeks more funds for performing states

Sanjay Jog
Mumbai, Feb 3

THE advisory panel headed by Union minister for power Suresh Prabhu has reached a consensus that the Centre should increase its annual allocation for states to Rs 5,000 crore from the present level of Rs 1,500 crore for the purpose of strengthening transmission and distribution network and renovation and modernisation of old power projects.

Simultaneously, the committee, comprising CPM MP Somnath Chatterji, former finance minister P Chidambaram, Prof Yogendra Alagh, BSES chairman RV Shahi, HDFC chairman Deepak Parekh and Teri director RK Pachouri, also emphasised that allocation be increased to those states which have taken effective action on the power reforms and distribution front.

Top sources told *The Financial Express* that the committee, which recently met in New Delhi, has made it clear that the states would have to respond to various reform measures and take necessary action. The recommendations deserve significance in the background of prime minister AB Vajpayee recently pulling up states for slow pace of power reforms.

The committee stressed that larger central allocation be linked with achievement of tar-

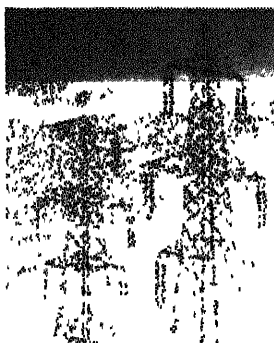
geted reduction in distribution losses. The committee members were of the view that such a gap be narrowed by the states and then only the purpose of hike in central allocation would succeed.

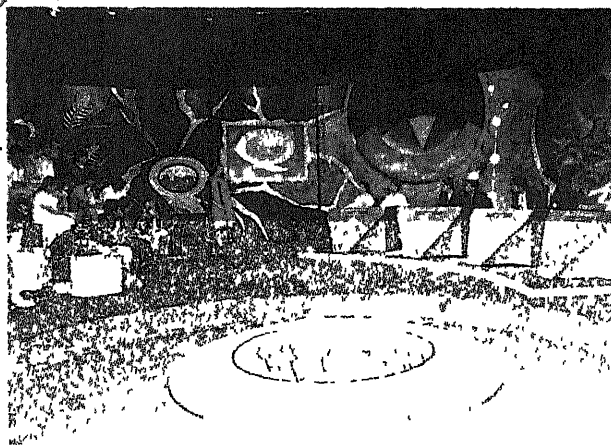
The committee warned that unless distribution at the ground level was set right, other policy initiatives were unlikely to succeed.

The panel also discussed threadbare the power ministry's approach on distribution reforms, including six-level interventions namely at the national level by way of legislative initiatives, at state level via reforms and restructuring of state electricity boards (SEBs), at 220 kV level to attract transmission loads, at distribution circle level to bring in accountability and at feeder level to contain the extent of distribution losses.

The ministry has identified 60 distribution circles. It has already decided that a larger central allocation should be made available to SEBs and states agreeing to take up reforms and achieve targets on this front.

The committee, which also discussed various provisions of Electricity Bill 2001, hailed the Centre's decision to delicense generation and termed it as a step in the right direction. The committee suggested that extra power available with the captive power generator be allowed to sell to the grid at an appropriate price.





HIS COMING Saturday, watch eight bright brains battle it out for a quest of the title of the Hero Honda Environment ambassador

To be telecast on Doordarshan National Network, Jeetiaquiz is the 13th edition of the TV quiz programme where will see 64 top performing students at the Green Olympiad 2001 compete for the ambassadorship

Part of IERI's annual efforts to sensitise teachers, parents and students on issues of environment, the qualifying round of the quiz had seen over 60,000 students participate in the event. The programme will be shown every Saturday at 6 p.m. on the National Network

Give Me Hope, JoAnne

From a distinguished career in the Canadian public service, she moved to Australia where she worked in the field of environment. This interest was to propel her eventually to become director, division of sustainable energy of the United Nations Work keeps her too busy to really pursue her hobbies of cooking and relaxing on beaches, JoAnne DiSano tells Lalita Panicker while on a visit to New Delhi to attend a preparatory conference on Rio+10 (10 years after the Rio de Janeiro meet on sustainable global development) at the Tata Energy Research Institute

Ten years down the line, what have been the failures of the Rio meet?

There have been some tangible results after Rio. We have had a number of preparatory meetings at the regional level. What we want is a bottom-up approach and this involves partnerships with a number of agencies. But the initiatives of Rio, I admit, fell far short of the challenges. These lie in the areas of poverty eradication and sustainable use of natural resources. These have not been fully realised. Developed countries must look at how they fared. Globalisation has manifested itself in many ways that are now becoming visible. We need to see how we can make globalisation work. The protests at economic summits show that its effects have not been equitable and this is what Rio+10 must address. What recommendations have you come up with so far to address these issues?

We are focusing on nine key areas. These are globalisation of development, poverty eradication, health, energy, ecosystems management, financial and technology transfer, Africa, sustainable development and instrumentalities.

These are broad issues but how do you get countries like the US, both the biggest donor and polluter, to stay in line?

Every country has a sovereign right if it wants to play the part of the polluter. However, irrespective of the US, other countries have moved ahead on a number of issues under the protocol. If one player chooses not to play, there is nothing much we can do about it. The European Union, on the other hand, has been very cooperative and it has immense resources. It has initiated a lot of work in cooperation with developing countries. We have to move forward in this manner.

For many countries, perhaps fuels like coal are a cheaper option. How

then can the UN insist on cleaner fuels with no compensation for them?

Of course, we would like everyone to use less polluting energy sources. But we cannot be dictatorial about it. Also, there is the question of how the fuel is used. Even coal, for example, can be used in a cleaner manner if the appropriate technologies are used. After the Marrakesh conference, this has been a focus, better technology. Do you think the HIV/AIDS epidemic, especially in Africa, where a large percentage of the productive population has been infected or has died, poses an enormous challenge to sustainable development?

It is startling. We have a lot of statistics coming out of Africa and there is no question that this health situation is very much linked to sustainable development. It is breaking down the social structure. When parents are infected or die, they leave behind either healthy or sick children. This raises the issue of security. In a country where half the male population is dead, security becomes a huge issue. Whole generations of people have died and many countries are ready to implode on themselves. We have to promote education, awareness, involvement with women's health



"We need to see how we can make globalisation work. The protests at economic summits show that its effects have not been equitable and this is what Rio+10 must address"

The UN has major programmes on AIDS, but governments have to work with us at the ground level. Funds alone cannot solve the problem. We have to form partnerships on a wider spectrum.

Post-Rio there has been talk of a business model for the poor. Business models are otherwise thought of as only involving the rich. Can you elaborate on this new model?

It would be so interesting to explore this further. That is the way towards poverty alleviation. A business plan for the poor which involves the poor is what we need but we cannot keep this only at the conceptual stage. One example we have of this today is the concept of community-based services. In fact, we have such a project in Andhra Pradesh and it is doing well. Now we have added an energy component to it. I feel that it is not funds alone which matter but giving people the know-how to empower

themselves. This should be focus of the business model for the poor.

Do you feel that big trade protocols like the World Trade Organisation tend to give environmental issues short shrift?

The United Nations Environmental Programme is working towards making sure that trade agreements are complemented by environmental issues. We have identified a number of stakeholders in this process — women, youth, non-governmental organisations, farmers, trade unions, scientists, indigenous peoples, local authorities and industry. We make sure that their voices are heard at trade forums and their concerns factored into agreements.

Do you feel that the UN's ability to dictate global agendas is vastly diminished after September 11? After all, the US did not really wait for UN approval before it set out to achieve its goals in Afghanistan.

No, this is not true. The Security Council was convened and the US action ratified.

Well, many don't quite see it that way. Now that the US action in Afghanistan is drawing to a close with the country reduced to a rubble, don't you think you have your work cut out in fostering some sort of sustainable development there?

It will be an enormous task. There is literally no infrastructure, it will have to be built from scratch. Institutions must be built up, the social fibre has been torn apart. There are so many issues to be addressed: cultural, historical, women's issues, mental health, all of which must be addressed from a sustainable development perspective.

To get onto another subject, so many years after Rio, all you have is a non-legally binding treaty on forests. Surely, this is inadequate in the face of our disappearing forests?

After Rio, I would say we have gone very far, much further than I expected, on the issue of forests. We have had a number of activities among the north, south and UN agencies based on consensus. We have the 'form on forests' which speaks of the operational side of forest management.

What has come of this particular meet, one of the many preparatory meets before Rio+10 in Johannesburg?

We are trying to prioritise, but, of course, it is not our job to dictate to anyone what to do. We have put forward a number of suggestions and we hope they will concretise in the months to come before the big meet.

Seminar on CNG paints it the villain

Times News Network

NEW DELHI To coincide with the expiry of the Supreme Court's deadline on CNG conversion on Thursday, the city government organised a seminar on issues in "public transport future fuels and technologies". Instead of generating a debate, the seminar ended as an attempt to paint CNG as the villain.

Chief minister Sheila Dikshit's high-decibel speech set the tone for the day. "Under no circumstances will we allow the public to suffer," she said. Without mentioning the government's inability to meet the deadline, she said "If a city is dependent on a single, untested fuel, we are asking for trouble."

City transport minister Ajay Maken said "If the petroleum ministry hikes the price of CNG, then DTC will have to hike fares."

DTC chairman Rakesh Mehta cited lack of dispensers, shortage of stations, inadequate service staff and gas leakage problems. He said "The system is yet to stabilise."

For the vehicle manufacturers, Telco and Ashok Leyland, safety was of paramount concern. They took much flak on account of the recent fires in CNG buses. Representatives from both companies failed to spell out any clear-cut solution to check the leakage problems.

IIT Delhi's transport expert, Dinesh Mohan said "It is wrong to refer to just one pill when one has a heart disease. One needs to take a host of steps along with medicines."

Ranjan Bose, senior fellow with Tata Energy Research Institute, said "No technology should be zeroed in on as the final one."

Only Indraprastha Gas Limited commercial director L Lobo spoke in favour of CNG. "CNG can meet Euro IV norms and also reduces noise pollution," he said.

Work towards rural energy: UNDP

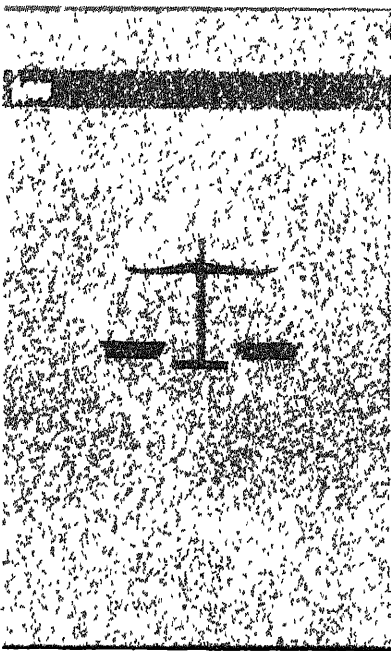
Our Bureau
NEW DELHI, 27 JANUARY

The United Nations Development Programme has called for concerted international action to ensure clean and safe cooking fuels to the world's poorest households and rural areas. A major shift in development cooperation is required, away from simply electricity provision and rural electrification, to meet the energy needs of the poorest 80 per cent.

Speaking at the two-day "Multi-Stakeholders Roundtable on Energy for Sustainable Development. New Partnerships for Concrete Actions", held in the capital last week, UNDP Resident Representative and UN Resident Coordinator, Dr Brenda Gael McSweeney said India had for long been a world leader in promoting

clean and renewable energy technologies. "We are working with partners such as the TERI that has been working to formulate local, national and global-level strategies for environmentally friendly solutions for rural energy", she said. The Round Table, organised by TERI and sponsored by the UN Department of Social and Economic Affairs (UNDESA) together with several United Nations organisations, has been called to provide inputs for the World Summit on Sustainable Development (WSSD) to be held in Johannesburg, South Africa, in September 2002.

Inaugurating the meeting, the Union Minister of State for Commerce and Industry, Mr Rajiv Pratap Rudy lauded the efforts being made in linking energy to diverse needs of people.



◆ **Regulation in
Infrastructure Services
Progress and the Way
Forward**

***Ed by S.K. Sarkar and
Kaushik Deb***

*Publishers Tata Energy Research
Institute, New Delhi*

Price Not mentioned

In South Asia independent regulation of infrastructure sectors is a new concept that has thrown up many challenges in the transition from a monopoly to a competitive environment. Regulation in infrastructure services has many dimensions. Its different facets, though they vary across sectors, converge on some core issues.

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Watch out for **TERRAQUIZ**

A 13-episode environment quiz
for schoolchildren



**Tune in to DD-1 (National network) every
Saturday, 6 p.m. from 26 January 2002**

TERRAQUIZ is based on day-to-day issues of energy and environment. It aims to enhance the knowledge base and bring about a more responsible attitude towards environment among children and adults. Winners have the golden opportunity of becoming Hero Honda Environment Ambassadors for the entire year.

The participants have been selected through a nation-wide environment examination called **The GREEN Olympiad**. The first and only one of its kind, The GREEN Olympiad contains questions that evolve from topics of daily concern like pollution, wildlife, renewables etc.

The GREEN Olympiad has now gone global, with 2001 seeing enthusiastic participation from Dubai, Kathmandu and Moscow.

**2002 can be your chance to become the
'Hero Honda Environment Ambassadors'**

*The registrations for The GREEN Olympiad 2002 will commence
in February 2002. Interested schools may contact TERI.*

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More Banga per buck

Hindustan Lever's financial performance for 2001 shows that, given the right strategy, a company can continue to grow even during the depths of an industrial slowdown. The growth is all the more commendable for an FMCG (fast moving consumer goods) major because consumer demand has suffered during the current slump. To be sure, Lever has had an uphill struggle trying to grow its topline, which increased by only 2.8 per cent in the year, after netting out the impact of businesses transferred into the company and out of it. However, the picture has improved sharply during the second half of the year, and revenue from the "power brands" has been very good indeed. Clearly, the company's strategy of pruning its brand portfolio to concentrate on the most profitable of them has paid dividends. This is also borne out by the 21 per cent growth in net profit in 2001, on a comparable basis — a remarkable feat in the current environment.

Having said that, however, the Lever management has been very cautious about the impact of the monsoons. The company's results are eagerly looked forward to for the insight they provide into the state of consumer demand, especially rural demand. Unfortunately, the results do not show any great jump in performance during the quarter that ended in December, when the impact of the kharif crop would have been felt on rural incomes. Chairman MS Banga has said quite correctly that while agricultural volumes will increase this year, much depends on the prices at which crops are sold. He has echoed the finance minister's view that it is now the rabi crop that holds the key to whether a spurt in consumer demand is in the offing. The Lever

chairman has also said that the current economic environment is best described as uncertain. That should be a sobering thought for those who have been arguing that all that is needed to turn the economy around is a good monsoon.

Over the years, Hindustan Lever has acquired a reputation for delivering earnings growth in spite of a tepid rise in the topline. Its three-pronged strategy — focusing on power brands, growing the foods business, and shedding unrelated businesses — has however given a new impetus to its growth. Coupled with the company's relentless drive for efficiencies in its supply chain, Lever has been able to squeeze earnings out of every rupee of revenue. And it has quite sensibly used the profits from the sale of its non-core businesses to strengthen its main business.

The company's brand management has much to do with its recent growth. In fact, the strategy has been so successful that Mr Banga has said that he will follow exactly the same strategy in 2002, and will be concerned only with implementing the strategy. The approach has been to choose a few brands that have the necessary potential for profitability, and concentrate resources on those. The aim is to get the maximum bang for every buck spent. It is far more than cost cutting — essentially, it involves managing all resources most efficiently. Small wonder that Lever's return on capital employed is a staggering 62.4 per cent. While there is no doubt that, in the ultimate analysis, a growing market is essential for expansion, the strength of Lever's strategy lies in the fact that in a stagnant market and with cut-throat competition, it has found the mantra for growth.

A specific improvement

It has been reported that the government has decided to change the duty regime for petroleum products, from an ad valorem system to a specific duty system. The former imposes taxes based on the value of the product being taxed, while the latter imposes them based on the physical quantity of the product. The change is to be announced in the forthcoming budget.

The respective merits of specific and ad valorem duty regimes have been a major issue in the public finance literature, and there is clear understanding about the conditions under which one or the other is superior. Generally speaking, specific taxes have a clear advantage in terms of administrative convenience. The assessing authority needs only to measure the physical volume being transacted, which is presumably much easier to do than to assess value, which requires a larger input of information. When the Administered Price Mechanism (APM) for petroleum products is terminated, it will inevitably set in motion a process of product and brand differentiation by incumbent and future retailers. Assessing value is going to become a lot more difficult under these circumstances. It is far better to reduce the burden of assessment than to surrender to the need to have more resources devoted to it.

However, apart from administrative convenience, specific taxes also prove to be superior in a situation when policymakers are faced with a dilemma about simultaneously pursuing two contradictory objectives. On the one hand, for a variety of reasons, the government would clearly like to see fuel usage being as conservative as possible. On the other, it would

like to collect as much revenue as possible, which results only from increasing usage. The resulting policy problem can be posed in two ways: maximise revenues from a given level of usage, or minimise usage for a given level of revenues. Theory indicates that specific taxes provide a better solution to this problem than ad valorem taxes. The taxation of alcoholic beverages poses an identical dilemma. Duties based on alcohol content rather than on production costs or market prices have proven to be an effective way of deterring alcohol consumption while protecting revenues. So, the reported shift to specific taxes for petroleum products is a welcome move.

But it is necessary to take the argument one step further. Rather than think in terms of petroleum products alone, and continuing with the alcohol analogy, it is necessary to take a broader view of energy taxes. The focus of deterrence should be on conserving the total usage of energy from non-renewable sources, while simultaneously encouraging a technological shift towards clean and renewable sources. A system of specific taxes (or subsidies) differentiated by source and environmental impact would provide an important fiscal instrument for moving the energy system of the country in that direction. A predictable long-run scenario of relative taxes, which specific taxes provide because they are insensitive to price changes, will induce desirable investments in equipment, conservation and research and development. Having taken this first step, the government will hopefully have the perspective to see the process through to its logical conclusion.

The

This month there have been several useful pointers to economic thinking. The most recent is a much-awaited lecture by Fischer whose clarity of analysis is a basis of learning for students. In the ten years he has been the economist advising the IMF's response to financial crises around the world.

The first point he made was that the eight countries from Argentina to Indonesia that recently suffered a crisis there had been a pegged or fixed exchange rate and, in an effort to defend the peg, these countries were forced to deplete their reserves — to no avail. The consequences were disastrous, as the countries were eventually forced to devalue, sometimes with less than zero net foreign exchange reserves.

Fischer did not make this a plea for a free floating exchange, he was not against a managed exchange rate that India has, but his was the cautionary advice that better to let the exchange rate go than to indeed perhaps well before, you reach the point of having nothing to fall back on. Countries and institutions that use capital controls to defeat the market invariably fail.

This lesson has surely been widely noted, particularly after the debacle of the currency board in Argentina. Flexibility in exchange rates has now become the only serious economy that internationally adheres to the currency board. Hong Kong and in so doing she has a very high price to pay in the form of the discipline needed for maintaining confidence.

Although the Indian system of a "managed" floating exchange rate is appreciated by Fischer and does not seem particularly problematic — indeed it may be optimal in maintaining confidence and exchange reserves — there is still a substantial disguised cost. It means that an expansionist fiscal policy is discouraged for fear of the country suffering a crisis. The fear that afflicts politicians and civil servants of the consequences of coming too close to disaster to prevent risks of overheating the economy.

It is, therefore, much to the credit of the Reserve Bank that in its January report on Currency and Finance it has shown the courage to publish a document which attempts to calculate the economic cost of the slow-down. It is a pity that the paper is written in the worst form of technical jargon. But the hypothesis they put forward is that when the market rate of interest

So

JAMES KYNGE

When China bewitches visiting chief executives, the spell is usually concocted from at least three elements: the size of the potential market, the quality of Shanghai's glitzy restaurants and dinners with local businessmen who speak excellent English and betray not a trace of their Communist past.

Wang Xuebing, the former head of the Bank of China who is now the focus of investigations into China's biggest banking scandal since the 1995 Asian financial crisis, was one such businessman. Wang was a dining partner or golfing acquaintance of many of the world's leading bankers and chief executives.

The shock at his downfall, therefore, has been palpable. The shock will dissipate over time. But there may be more lasting implications from the Wang Xuebing scandal. First, foreign financial groups currently scouring China for potential equity, or joint venture partners following Beijing's admission into the World Trade Organisation, may become more circumspect. Second, the incident may influence policy. Beijing is preparing for a Financial Work Conference early next month that is expected to set a five-year reform agenda. Chinese officials say



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Inaugural Address

Thiru T R Baalu

Union Minister for Environment & Forests, Government of India

Valedictory Address

Dr Bjorn Stigson

President World Business Council for Sustainable Development Switzerland

Key Speakers from India & Abroad

- Mr Pavan Bajnork, Secretary, MOEF, GOI
- Dr Philippe Bergeron, Director, RIET SINGAPORE
- Mr K G Bhaskar, Vice President, Reliance Power Limited
- Mr Dilip K Biswas, Chairman, CPCB, GOI
- Dr A R Dasgupta, Project Director, SRO
- Mr Elliot Diringer, Director, Policy Centre on Global Climate Change, USA
- Mr A M Gokhale, Additional Secretary, MOEF, GOI
- Mr S V Jambale, CGM, Environment, Indian Aluminium Co. Ltd.
- Mr Henry John, TQ2, ISO AUSTRALIA
- Prof P D Jose, Indian Institute of Management, Bangalore
- Mr A T Kusre, GM, Technology, ICICI Ltd.
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Kerosene to cost more, may go up by 70 paise from April 1

Pioneer News Service

New Delhi

THE GOVERNMENT is likely to bring down subsidy component on kerosene from the present 37 per cent to about 33 per cent from April 1, 2002, which means a 70-75 paise increase in the price of kerosene, an indication to this effect was conveyed by Petroleum Minister Ram Naik here on Tuesday.

Also, subsidy on LPG is likely to be reduced to 15 per cent from the present level of 40 per cent which would effectively increase cylinder price by Rs 90.

Talking to mediapersons at the Indian Oil and Gas Conference the minister said that the subsidy on LPG could be reduced to 15 per cent as per in the 1997 Cabinet decision on deregulating the petroleum sector. However, "we have now decided to phase the subsidy on LPG out in the next 3-5 years."

Post deregulation the domestic prices would have to comply with the volatilities in the international oil prices, he said, however, hinting at the government's intervention to curb variation in the domestic prices at various locations within the country. While the government would ensure uninterrupted supply of petroleum products at fair prices, the private oil marketing companies would be required to fulfill social obligations of setting up retail outlets in far-flung areas, Mr Naik said.

In order to ensure level-playing field and promotion of competition, access to monopolistic infrastructure in the nature of common carrier system on non-discriminatory basis and at reasonable tariffs by all entities would need to be ensured, Mr Naik said.

A draft bill to establish a statutory petroleum regulatory board is under finalisation, he said. "Detailed modalities are being worked out on the issue of government intervention and the ministry is prepared for the post-deregulation era," Mr Naik pointed out.

PDS kerosene may cost 75 paise more post-APM

Our Infrastructure Bureau
New Delhi, Jan 15

THE government was planning to increase price of kerosene for public distribution system (PDS) by about 75 paise per litre to bring down the subsidy element on this to 33.3 per cent from April 1, petroleum minister Ram Naik told the press on the sidelines of the fourth Indian oil and gas conference organised here on Tuesday.

However, Mr Naik refused to say much on the government's plans to increase the price of domestic liquefied petroleum gas (LPG) after the subsidy on this would be brought down to 15 per

cent from April 1.

The minister also said bringing down subsidy on domestic LPG to the residual level would be difficult at one go as it would entail increasing consumer prices by about Rs 90 a cylinder. "The Centre has already announced its decision to completely phase out subsidies on LPG and kerosene in the next three-five years," he said. At present, subsidy on kerosene stands at 37 per cent while that on domestic LPG is around 40 per cent.

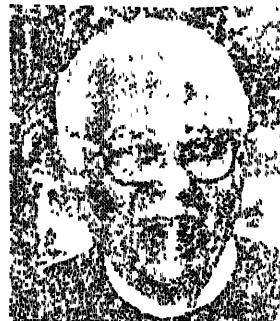
However, a senior petroleum ministry official said subsidy on LPG would be brought down to 15 per cent by April. "The ministry has already asked the finance

ministry to adjust the duties on LPG in such a way that it does not amount to a major price rise after bringing down subsidies to the post-APM level of 15 per cent," the official said.

The official also said while bringing down subsidy on LPG from the current level would mean a price hike of Rs 90 per cylinder, it was being contemplated that the increase should not be more than Rs 40 a cylinder.

"This, too, may not be done at one go. A Rs 40 hike may also be

done in phases during 2002-03. However, a final decision will be taken after the Budget," the official added.



Earlier, speaking on the need to cushion domestic prices from the impact of volatility in the global oil markets, Mr Naik said in the absence of any intervention, domestic prices would also have to bear the brunt of such global price volatility.

He also hinted at government intervention to curb variations in

retail consumer prices in different parts of the country.

"While the government would ensure uninterrupted and adequate supply of petroleum products at fair prices in the decontrolled regime, the private oil marketing companies would be required to fulfill their social obligations of setting up retail outlets in far-flung areas," he said.

The marketing activities constitute the most lucrative segment in the oil sector. While increased competition in this segment would benefit the consumers post-APM, efforts would need to be made to facilitate private sector participation in other segments of

the sector as well, he said.

In order to ensure a level-playing field and promote competition, access to the monopolistic infrastructure, in the nature of common carrier system on non-discriminatory basis and at reasonable tariffs by all entities, would also need to be ensured, Mr Naik said.

A draft Bill to establish a statutory petroleum regulatory board was also under finalisation, he said, adding, "on the issues requiring government intervention, detailed modalities are being worked out. In brief, let me state that we are fully prepared for the proposed deregulation effective April 1."

IOC, RIL seek govt nod to hedge refinery margins

Our Infrastructure Bureau
New Delhi, Jan 15

THE government is planning to allow domestic oil firms to hedge refinery margins in a phased manner. Both Indian Oil Corporation (IOC), the country's largest refiner, and Reliance Petroleum, the largest private sector refiner, have been asking the government to allow them to hedge refinery margins in the wake of extreme volatilities in the international oil market.

While government had, in September last year, allowed the hedging of crude oil purchases, refinery margins and inventories are presently governed by the administrative price controls.

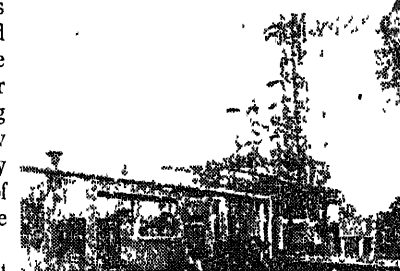
Under the present dispensation, petroleum prices are fixed by the government and have little connection with the prevailing international prices. This puts margins under tremendous pressure when there is little difference between crude and product prices.

Speaking to reporters on Tuesday, president (petroleum business), Reliance Industries (RIL), PMS Prasad said that the company already hedges its physical oil imports and exports on international benchmark futures markets and over-the-counter markets.

Mr Prasad said that the Reserve Bank of India (RBI) allows hedging only of imports and exports as the government fears that hedging margins would involve a huge drain of

foreign exchange, particularly as the authorities would have to permit hedging of domestic sales for all commodities, not just petroleum.

"Reliance imported crude oil worth more than \$4 billion per year and a saving of one cent per



barrel would result in annual savings of \$2 million," he said. Industry should be allowed to hedge domestic sales also. "Risk is risk. It does not differentiate between domestic and international markets," he added.

Mr Prasad, while talking to reporters on the sidelines of the 4th Indian Oil and Gas Conference said that refiners needed to hedge margins in view of the deregulation of India's oil and gas sector scheduled in April.

"The government has indicated to us that hedging would be allowed gradually. In fact we met RBI and other government officials who said that they would do this in a phased manner," Mr Prasad told reporters.

Mr Prasad said oil refiners normally maintain crude inventory of 15-20 days and if crude oil prices slide, like it has done from the last couple of months, the inventory cost comes higher than the export price of product.

No further production cuts: Opec

Our Infrastructure Bureau
New Delhi, Jan 15



THE Organisation of Petroleum Exporting Countries (Opec) will not go in for further production cuts and expects the global crude oil prices to stabilise around \$22 a barrel. Speaking to reporters, Iranian petroleum minister, Bijan Namdar Zanganeh said that there was no need to go in for further production cuts as Opec member countries have already cut production by 1.5 million barrels per day since January 2001. "This 1.5 million barrels per day cut by Opec countries and day by non-Opec oil producing countries is enough for balance," he said. Asked if Opec was considering change in its preferred price band of \$22-28 per barrel, he said, "We haven't changed it yet. It is necessary to change the price band or Mr Zanganeh said it should be com-

Indo-Iran pipeline: Consultant to be appointed soon

NATIONAL Iranian Oil Company (NIOC) and Gas Authority of India (GAIL) would appoint a consultant for the pre-feasibility study for an onland and offshore Indo-Iran natural gas pipeline.

This was stated by Iranian petroleum minister, Bijan Namdar Zanganeh after his meeting with Union petroleum minister Ram Naik on Tuesday.

While Iran has favoured natural gas export to India through an onland pipeline passing through Pakistan, India has raised security and safety aspects of delivery at its borders if the pipeline comes via its hostile neighbour

fortable with international crude prices hovering on the lower side of the \$22-28 a barrel price band, and added "We should consider reality in the market."

He said that Opec was closely monitoring the response of the market, which has seen unusually low crude oil prices. "Production cuts already announced will create good situation in the market for stabilising the prices and compliance by Opec and non-Opec countries," he added.

Asked about what level of prices could Opec sustain, Mr Zanganeh said, "We prefer fair prices and low prices were not good." International crude oil prices were ruling at around \$19 per barrel today.

Earlier, speaking at the 4th Indian oil

and gas conference, Mr Zanganeh said that Iran was prepared to meet the long-term oil and gas needs of India as a reliable supplier.

"I believe that the trade inter-relationship of Iran and the Asia-Pacific region, especially the Indian subcontinent, must ultimately lead to closer economic ties and the exchange and incorporation of energy and technology for the advancement of common goals," he said.

On import of natural gas from Iran, Mr Zanganeh said, "Export of natural gas to India, via pipeline, either through land or via international waters, are options to be studied by the two countries, which will hopefully bring in long term peace and calm in the region."

Russian cos to acquire Birla group's stake in MRPL

Our Infrastructure Bureau
New Delhi, Jan 15

THE Moscow-based Sun group has joined hands with the Russian oil and gas company Gazprom for acquiring Aditya Birla group's 37.39 per cent stake in the Rs 2,400-crore Mangalore Refineries and Petrochemicals Ltd (MRPL).

Sun group and Gazprom consortia is already in the race of buying the Centre's 33.58 per cent stake in IBP Co Ltd.

Executive director of Sun group, Shiv Vikram Khemka, confirmed that his company had initiated talks with the AV Birla group on buying the latter's stake in MRPL but no formal price had been quoted so far.

Mr Khemka said that both Gazprom and Sun group have a long standing partnership in Russia and it was obvious for the two to work together in various oil and gas ventures in India.

In addition to Sun group, even K. J. Somaiya Petroleum Corporation (KPC) has expressed interest in picking up Aditya Birla group's equity in MRPL. Even Indian Oil Corporation (IOC) is open to buying

Birla group in MRPL.

Sun group, KPC and IOC have renewed their interest in the 9 million tonne refinery after Birlas failed to strike a deal with equal partners Hindustan Petroleum Corporation Ltd (HPCL) for their exit from the loss making joint venture.

Birlas, who have been seeking an exit from the joint venture with HPCL for the past nine months, are seeking about Rs 450 crore (at Rs 16 a share) for selling its stake but the offers made by HPCL so far have been significantly below its expectations, sources said.

Commenting on buying Centre's stake in IBP, Mr Khemka said that there might be other partners in the consortia that had bid for IBP but decline to elaborate. "We are pursuing for IBP aggressively," he said, adding the company was also interested in refining for which it was talking to a number of players including MRPL.

Stating that Sun group was not very keen on power sector in India, he said the company's interests included downstream refining and marketing as well as upstream oil and gas exploration for which it had initiated talks with a number of companies.

Kerosene, LPG prices likely to be hiked

HT Correspondent
New Delhi, January 15

THE GOVERNMENT is likely to increase the prices of kerosene and LPG in the next budget. This was indicated here Tuesday by Petroleum Minister Ram Naik on the sidelines of the Indian oil and gas conference organised by TERI.

However, the minister reiterated that the increase would not be in line with the milestones set by the 1997 cabinet decision for phasing out subsidies on petroleum products.

In the case of kerosene the subsidy has to be reduced from 37 per cent to 33 per cent from April 1 this year, which could be achieved by a 75 paise per litre hike in the price of the fuel at current global crude oil prices. However, if crude prices shoot up then a higher increase would be required to scale down the subsidy to 33 per cent.

LPG poses a problem as the roadmap chalked out requires a sharp reduction in the subsidy from the current level of 40 per cent to a mere 15 per cent. This would require a price hike of Rs 90 per cylinder at current world crude prices.

Naik stated that "bringing down subsidy on LPG to the residual level would be difficult in one go. We have now decided

to phase out the subsidy on LPG gradually in three to five years.

In his inaugural speech at the conference, Naik hinted at government intervention to curb variations in retail consumer prices in different locations in the country.

He also emphasised the need to cushion domestic prices from the volatility in the international oil markets.

He said the government would ensure uninterrupted and adequate supply of petroleum products at fair prices in the decontrolled regime. Even private oil marketing companies would be required to fulfil social obligations of setting up retail outlets in far-flung areas.

"The marketing activities constitute the most lucrative segment of the sector. While the increased competition in this segment post-deregulation would benefit the consumers, efforts would need to be made to facilitate private sector participation in other segments of the sector," he said.

In order to ensure level playing field and promotion of competition, access to monopolistic infrastructure in the nature of common carrier system on non-discriminatory basis and at reasonable tariffs by all entities would need to be ensured, he added.

tioned 3.45 lakh equity shares of Rs 1 each at Rs 930 per share aggregating

April may see costlier kerosene

Our New Delhi Bureau

NEW DELHI 15 JANUARY

GOVERNMENT today indicated that kerosene prices are likely to be increased by about 70-75 paise per litre to bring down subsidy on the mass consumed cooking medium to 33.3 per cent from April 1.

"Presently subsidy component on kerosene is to the tune of about 37 per cent. This would be brought down to 33 per cent with dismantling of administered pricing mechanism (APM) from April 1," petroleum minister Ram Naik told reporters on the sidelines of the 4th Indian Oil & Gas Conference here.

Prices changes, if any, would be effected in the General Budget for 2002-03, he said.

Though subsidy on kerosene would be brought down to the residual level of 33 per cent from next fiscal, that on cooking gas could be reduced to 15 per cent, he said.

"Bringing down subsidy on LPG, which presently is at around 40 per cent, to residual level would be difficult in one go as it would entail increasing consumer prices by about Rs 90 per cylinder. We have now decided to phase the subsidy on LPG out in 3-5 years," Naik said.

Chandigarh: Wednesday, January 16, 2002

Kerosene, LPG prices likely to go up

TRIBUNE NEWS SERVICE

NEW DELHI, JANUARY 15

Kerosene prices could go up by about 70-75 paise per litre after the government dismantles the Administered Pricing Mechanism (APM) for petroleum products by April 1, 2002 while that of cooking gas would be hiked in phases.

The Petroleum Minister, Mr Ram Naik said the hike in prices would be necessitated as the government wants to bring down the subsidy on kerosene from the existing 37 per cent to 33 per cent from April 1

Speaking to newsmen on the sidelines of the fourth Indian Oil and Gas Conference here, the Minister said after the APM is dismantled any price change would be effected in the General Budget.

He said like kerosene, the government has also decided to reduce the subsidy on cooking gas (LPG) from the existing 40 per cent to 15 per cent. However, the subsidy would not be reduced in one go as the burden on the consumer would be too heavy, Mr Naik said.

"Bringing down subsidy on LPG, which presently is at around

40 per cent, to residual level would be difficult in one go as it would entail increasing consumer prices by about Rs 90 per cylinder. We have now decided to phase the subsidy on LPG out in 3-5 years," Mr Naik said.

The Minister stressed that the government was fully geared for the proposed deregulation effective April 1, 2002.

Mr Naik said one of the challenges in the post deregulated regime would be to ensure uninterrupted and adequate supply of petroleum products at fair prices

throughout the country including far-flung areas.

To ensure a level playing field and to promote competition, access to monopolistic infrastructure in the nature of common carrier system on non-discriminatory basis and at reasonable tariffs by all entities would need to be ensured, he said.

Other challenges include having an appropriate duty structure, balanced development of the oil sector, administration of subsidies on kerosene and LPG and freight subsidy for far flung areas.

Kerosene to be costlier by 70 paise: The government would raise the price of kerosene by about 70-75 paise per litre from April to reduce the subsidy to 33.3 per cent as stipulated in the roadmap for removal of pricing controls, oil minister Ram Naik said, assuring government intervention to keep petrogoods prices under check in the free market scenario. "Kerosene now has about 37 per cent subsidy. This is to be brought down to 33 per cent. The changes, however, would be made only in the budget."

ECONOMY

Kerosene prices may go up by 70-75 paise a litre post-APM

Our Energy Editor
NEW DELHI, 15 JANUARY

KEROSENE PRICES may go up by about 70-75 paise a litre when the subsidy on the commodity from 37 per cent to 33.3 per cent after the dismantling of the administered pricing mechanism (APM) in the oil sector on April 1.

Ram Naik

The price changes, if any, would be effected in the Union Budget for 2002-03, petroleum minister Ram Naik told newsmen on the sidelines of the Fourth Indian Oil and Gas conference here.

Though the subsidy on kerosene sold through the public distribution system would be brought down to the residual level of 33 per cent from the next fiscal, that on liquefied petroleum gas could be reduced to 15 per

cent as envisaged in the 1997 Cabinet decision on deregulation of petroleum sector, the minister said.

Earlier speaking at the con-

ference, Naik hinted at the government intervention to curb variations in retail consumer prices in different locations in the country.

"Post deregulation, in the absence of any intervention, there would be variations in retail consumer prices in different locations in the country," he said.

Opec unlikely to cut output any further

Our Energy Editor
NEW DELHI, 15 JANUARY

The Organisation of Petroleum Exporting Countries (Opec) is unlikely to resort to further production cuts to prop up prices. But it would prefer the international crude prices to stabilise around \$22-a-barrel.

"I don't think we need to have more cuts because as we analyse the market situation, a cut of 1.5 million barrels per day by Opec and 0.5 million barrels per day

by non-Opec countries is enough to maintain a balance in the market," Iranian oil minister Bijan Zanganeh told newsmen on the sidelines of the fourth Indian Oil and Gas conference here today.

Asked what level of prices could Opec sustain, Zanganeh said Opec should be comfortable with the international crude prices hovering on the lower side of the \$22-\$28-a-barrel price band.

Earlier, speaking at the conference, Zanganeh said Iran was

prepared to meet the long-term oil and gas requirements of India as a reliable supplier.

"I believe that the trade relationship between Iran and the Asia-Pacific region, especially the Indian subcontinent, must ultimately lead to closer economic ties," he said.

On import of natural gas from Iran, Zanganeh said "Export of natural gas to India, via pipeline either through land or international waters, is an option the two countries need to analyse."

By Our Special Correspondent

Delivering the inaugural address of the fourth Indian Oil and Gas Conference organised by the Tata Energy Research Institute (TERI), Mr Naik, said the draft bill to establish a statutory petroleum regulatory board was being finalised and the detailed modalities were being worked out on issues requiring Government intervention.

far-flung areas. To ensure a level playing field and promote competition, access to monopolistic infrastructure in the nature of common carrier system on non-discriminatory basis and at reasonable tariffs by all entities would need to be ensured.

He pointed out that the disinvestment of Government's equity stake in IBP was scheduled to take place even before the dismantling of the administered price mechanism.

10 paise kerosene price hike likely

Bureau

DELHI, Jan 15

Union Petroleum Minister, Pramod Kumar Naik, has hinted at the possibility of a hike in kerosene prices during the forthcoming Budget by around 70 paise to bring the subsidy at a level of 33 per cent of import parity price. This is in line with the dismantling schedule of the administered pricing mechanism (APM) for fiscal 2002. "Any changes will be addressed in the Budget," Naik said while inaugurating an oil and gas conference organised by the Tata Energy Research Institute (TERI) here on Monday. The Minister said in the case

of LPG, there is a subsidy of around Rs 90 per cylinder over and above the 15 per cent subsidy allowed as per the 1997 Cabinet decision on dismantling of the APM for fiscal 2002. Mr Naik, however, said that it would not be possible for the consumer to bear the hike at one go and hence price hikes on LPG will be staggered.

Discussing the challenges posed by the proposed deregulation of the sector on April 1, Mr Naik said that it was imperative to ensure uninterrupted and adequate supply of petroleum products at fair prices throughout the country including far-flung areas.

"To ensure a level-playing

field and to promote competition, access to monopolistic infrastructure in the nature of common carrier system on a non-discriminatory basis and reasonable tariffs needs to be ensured," he said.

As regards the protection of consumers' interest and redressal of their grievances, the Minister said that a system needs to be put in place that would ensure resolution of disputes amongst entities and consumer groups.

Other challenges include having an appropriate duty structure, balanced development of the oil sector, administration of subsidies on kerosene and LPG and freight subsidy for far-flung areas.

Reliance Petro hedging plans

NEW DELHI: Reliance Petroleum Ltd has sought the Government's approval to hedge crude, domestic refinery margins and product inventory. Speaking to newsmen here, the RPL President, Mr P.M.S. Prasad, said, "we have asked the Government for permission to hedge crude, domestic refinery margins and inventory price risk management."

Last year, the Government had allowed companies to hedge crude. However, margins and product inventory are still governed by administered prices - Our Bureau

'Protect environment or perish'



Sir Crispin Tickell, Chancellor, University of Kent

UNITED NEWS OF INDIA
NEW DELHI, JANUARY 14

PEOPLE the world over have to change their lifestyles or nature will lead them to extinction as she has done to over 99 per cent of species that ever lived, said eminent British environmentalist Sir Crispin Tickell.

Delivering a lecture on 'Is economic growth compatible with sustainability', organised by the Tata Energy Research Institute (TERI) and the British High Commission

as part of the Indo-UK Science Festival, Sir Crispin said though the world had witnessed immense economic growth and development since the industrial revolution, it came at a heavy price.

"We have exploited natural resources to their limits," he said.

Sustainable development, which has become the catch phrase of environmentalists, policy-makers and politicians the world over, has remained an elusive dream.

Sir Crispin outlined five principal factors threatening the fragile ecological balance of our planet. They are population growth, deterioration of land quality and accumulation of waste, pollution of water resources, destruction of other

living species and the 'chemistry' of the atmosphere.

"The classical economic theory emphasised linear growth and free markets, and advocated industrialisation as the panacea for all economic problems," Sir Crispin said.

The emphasis on consumerism and generation of wealth is so great that we tend to ignore the far-reaching effect on environment, he added.

"The reconciliation between the upside and downside of development is sustainability," he said.

The plethora of international agreements and conventions on environment protection have been largely been ineffective in attaining the desired objectives, he noted.

Citing the example of chlorofluorocarbons, the main culprits causing ozone layer depletion, he said technology often threw up un-

foreseen problems.

Sir Crispin is the Chancellor of the University of Kent and is permanent representative to the United Nations.

Dr Prodipto Ghosh, additional secretary in the Prime Minister's Office, said the primary requisite for sustainability was that the concept of development had to be comparable across societies.

Dr Leena Srivastava, Director, Regulatory Studies and Governance Division of TERI, cautioned that the rapid depletion of biological resources would deprive us of knowing the utility and value of species. In this context, she cited the example of rice which originally had some 10,000 varieties but is now down to 10 main ones. Dr Srivastava said poor management of our resource base is the primary reason for underdevelopment.

15 JAN 2002

Change in lifestyles is imperative for survival

NEW DELHI, Jan 14 (UNI) —

People the world over have to change their lifestyles or nature will take them on the road to extinction as she has done to over 99 per cent of species that ever lived, says an eminent environmentalist.

Delivering a lecture here on "Is Sustainable Development with

organised by the Tata Energy Research Institute (TERI) and the British High Commission as part of the Indo-UK Science Festival, Sir Crispin Tickell said though the world had witnessed immense economic growth and development since the industrial revolution, it came at a heavy price.

"We have exploited natural resources to their limits," he said. Sustainable development, which is the sine qua non of our existence, and has become the catch phrase of environmentalists, policy-makers and politicians the world over, has remained an elusive dream.

Sir Tickell outlined five principal factors threatening the fragile ecological balance of our planet. They are population growth, deterioration of land quality and accumulation of waste, pollution of water resources, destruction of other living species and the 'chemistry of the atmosphere'.

The expert, chancellor of the University of Kent, said, "The classical economic theory emphasised linear growth and free markets. 'Industrialisation is seen as the panacea for all ills. And it is here that the incompatibility is most glaring between economy and the environment as they espouse divergent ends."

The emphasis on consumerism and generation of wealth is so great that we tend to ignore the far-reaching effect on the environment. "The reconciliation between the upside and downside of development is sustainability," he said.

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— who was Permanent Representative to the United Nations — noted.

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text, she cited the example of rice which originally had some 10,000 varieties but was now down to ten main ones.

Dr Srivastava said poor management of our resource base was the primary reason for underdevelopment.

"The poor are expected to contribute towards ecological conservation but are not given adequate opportunity to satisfy their economic needs," she added.

She said the developing countries had to be given adequate space and time to address their problems.

GREEN CRUSADER ANIL AGARWAL IS FONDLY REMEMBERED BY FRIENDS AND COLLEAGUES

A man who was in a tearing hurry



by RAJKUMAR LEISHEMBA

EVEN before all the toasts to the new year could be downed, green crusader Anil Agarwal bid adieu to the year and the world. As a media commentator wrote, "54 is no age to die." It really isn't.

Writing a tribute to so powerful a personality as Agarwal is difficult. One admired him for so many things. His spearheading of the crusade for a cleaner environment. His dedicated crafting of one of the first green NGOs in the country that constantly and consistently championed the green cause in fora here and abroad. His brilliant editing of a magazine on environmental issues

that could vie with any glossy on the shelves. His determined victory in getting the use of compressed natural gas (CNG) approved in a city whose denizens had resigned themselves to slow death through pollution.

Recalls Suneeta Narain, a director of the Centre for Science and Environment (CSE), who has worked closely with Agarwal for 20 years, "Anil was a bundle of energy, he had tremendous enthusiasm. He was really committed to his work and never compromised on quality. He expected others to live up to the standards that he set, though they were demanding."

In fact, Ms Narain points out, many people who worked with Agarwal found it difficult to live up to his expectations. But even those who left him in anger came to

his cremation, which halted traffic on the roads of Delhi for its duration. There could be no better evidence that most everybody understood that Anil did what he did for a reason, that his was a drive for excellence, she says, summing up.

M A J Jeyaseelan, executive director, Business Information Service Network, FICCI, agrees with her. Mr Jeyaseelan says, "Anil was a crusader in the true sense. I got to know about him through the media and my impression about him was that he was a dedicated person to the cause he was working for. Though my interaction with him was limited only to meeting at conferences and public gatherings, he was respected by the industry. The industry always praised his efforts and took his initiatives in the

right spirit, although there were differences of opinion."

"Anil was one of the pressure groups that sought for a cleaner environment, and we really appreciate it. We need more people like him. His demise is an irreplaceable loss," he adds.

Tata Energy Research Institute (TERI) director Rajendra K Pachauri describes Agarwal's death as unfortunate. "We will miss him. In a democracy people have differences. We have had ours, but that didn't make his work less important in our eyes," Mr Pachauri said soberly.

On a more personal note, K P Nyati, head of the Confederation of Indian Industry's (CII's) environment division, who had the opportunity of knowing Agarwal from close quarters, says, "To me, he was a very rational man. Despite his involvement in advocacy for the environment, he was rational in his approach, although others might think him to be extreme in his views. It is his rational thinking that stood out."

Nitya Jacob, regional coordinator (South Asia), Oneworld.net, who worked with Agarwal for CSE's magazine, *Down To Earth*, says, "When I joined CSE, *Down To Earth* was about to be launched, I had heard about Anil as a person who was demanding, who was intolerant of people who were unable to deliver. But as I got to know him, he was not completely closed. Although many people thought he had extreme views, he was willing to listen, provided you were able to support your views with sound reasoning and facts."

Recalling an incident, Mr Nyati says, "It was a recording for a panel discussion on two-wheeler pollution on CNBC in which we appeared together. The discussion was anchored by Paranjy Guha Thakurta and we were told that it would be a 30-minute programme. However, the discussion went on for nearly 75 minutes. After the recording, Anil told Guha Thakurta that he should have informed us beforehand that the recording would go on for so long. To this Guha Thakurta said that since I represented the industry and Anil the environment lobby, he was waiting for a flare-up in the discussion, which never happened." This, explains Mr Nyati, happened pri-

marily because Anil was very rational in putting his views across and equally receptive of counterpoints.

Nevertheless, like any other human being, Agarwal had his share of shortcomings—quick anger chief among them. Says Mr Jacob, "Dealing with him was a bit tricky as you never knew what mood he was in. But as a journalist, I did enjoy a fairer deal from him as compared to the research scholars."

Mr Jacob recollects an incident, "It was sometime in 1992, when I was new to the organisation. A research scholar went to Anil's room to submit a report on a project I was in the next room. After sometime I heard a high pitched voice coming out of his room for 45 minutes. Anil was dismissing the research scholar and telling her to get lost as she knew nothing. I was at a loss, not knowing what to do."

Anil Agarwal's dedicated crafting of one of the first green NGOs in the country that constantly championed the green cause in fora here and abroad was admirable

But as CSE coordinator Geeta Kavaranas says, "He made use of his anger to push us to achieve results. It was not for himself, he invested a lot of himself in all of us. He might have stretched us to the limit, but after the work was completed, we realised that it was for our good."

Despite his volatile nature, Agarwal is fondly remembered. "When I met him for the first time about 20 years ago, when I joined CSE after finishing college as a young environmentalist, my first impression of him was that he was a man in a hurry. That was a feeling I continued to have till the day he left us," says Ms Narain.

"We Indians are good at creating people, but Anil wanted to create an institution, which would be remembered ever after and CSE is the result of his efforts."

Ms Narain adds, "Although CSE will miss his dynamism and ideas profoundly, the credit goes to him that he has ensured that the organisation will flourish even after him. Towards the end, he had decentralised almost everything."

Mr Jacob shares her views, "Working with him was a great learning experience as he never took things for granted. He always made sure that everything was done in an organised manner. Travelling around the country and collecting facts was one thing, but putting it in context was another. He was a great helping hand when it came to putting those facts in the proper perspective."

Agarwal never stayed away from helping anybody, for that matter. It was good to have him as a mentor. He never differentiated between personal and professional work. He seemed to live to work and he worked to live. He was quite opinionated but generous, says Mr Jacob.

Ms Kavarana adds, "He was a visionary, a good leader and a great administrator as well, who was detailed in his organisational capabilities." He was instantaneous in praising good work and never hesitated a second in firing a bad worker, she recalls.

Recalling another incident, Mr Nyati says, "Another quality of Anil's was his fearlessness in speaking up if he thought he was justified." Mr Nyati recalls an incident in France about which Agarwal told him. Agarwal had been invited for a lecture by an organisation, but ironically, he ended up criticising that very organisation.

Later, when the president of the organisation made a comment that at least Anil could have been more courteous, Agarwal called a press conference and announced, "You can facilitate developing countries by sponsoring and inviting them to speak, but you cannot buy them." He could never be influenced by superficial things, says Mr Nyati.

Those who worked with Agarwal remember him as a man who could be described simply—as humane. His death leaves a big void in the movement for a cleaner environment.

TERI in the news



Tel 468 2100 or 468 2111
E-mail mailbox@teri.res.in

THE ASIAN AGE

Teri to start terra quiz on DD, shows over the weekend

New Delhi. Tata Energy Research Institute on Friday announced the launch of the terra quiz, a quiz on environmental issues, to be telecast every Saturday from Saturday

The 13-episode programme that will be telecast at 5.30 pm on DD-I channel, is anchored by TV personality Sanjana Kapoor and features Sharmila Tagore, Shabana Azmi, Nandita Das, Khushwant Singh, Nafisa Ali Sodhi, Bishen Singh Bedi, Jatin Das and others in the celebrity round, a Teri release on Friday said.

Nearly 80,000 students from about 8,000 schools across the country, participated in the annual Green Olympiad, the qualifying round for terra quiz

The quiz revolves around topics of air and water pollution, environment-friendly initiatives and practices, land and water resources. (PTI)

In Conversation

Improving city pollution standards

DILIP BISWAS, chairman, Central Pollution Control Board (CPCB) in conversation with ANURAG SINGH on the measures the body is taking to check pollution in Delhi



Q: Does Delhi's dubious distinction as the fourth most polluted city in the world, still stand unredeemed?

A: Delhi acquired this 'distinction' because of high levels of air borne dust particles, known as Suspended Particulate Matter (SPM) in technical parlance. The dubious status was accorded by the World Health Organisation (WHO), who attributed it to natural dusty conditions as well as man-made sources of pollution. However, with anti-pollution initiatives gaining momentum in recent years, there has been a perceptible improvement. The run-away rate of increase in pollution levels has been arrested. This is borne out by the air quality monitoring data collected over the years as also by clear skies when stars are visible and the less number of hazy days.

Q: A recent report by TERI, on the contrary, has claimed that the level of RSPM has in fact increased in Delhi. Is this true? What is CPCB doing to rectify such a state of affairs?

A: The TERI report relates to the increase of Respirable Particulate Matter (RSPM) under adverse meteorological conditions and on occasions like Diwali when the air becomes polluted, thanks to the indiscriminate bursting of firecrackers. In winter, during certain periods of time low temperatures and wind currents lead to a phenomenon called "inversion." Under such condi-

tions, pollutants are not easily dispersed and remain suspended in the air. As a result, the pollution levels increase. This is what happened during Diwali last year. Stable weather coupled with the added burden of pollution caused by firecrackers resulted in haze with high RSPM levels which took some days to get back to normal.

To rectify this state of affairs, it is necessary to stimulate awareness and involvement. To this end, CPCB has formulated emission and effluent standards

for various polluting sources. We have also been instrumental in preparing a White Paper and an Action Plan for pollution control in the National Capital Region. Some of these action plans have been implemented by the concerned agencies while others are in various stages of implementation. Briefly, these include phasing out of lead and reduction of benzene content in petrol, introduction of low sulphur diesel, supply of pre-mix 2-T oil, phasing

waste water treatment and Common Effluent Treatment Plants (CETPs) in industrial estates.

Q: What is the present level of pollution in River Yamuna. Has the shifting of industrial units helped in any way?

A: River Yamuna between Wazirabad and Okhla is, by far, the most polluted stretch because of inadequate flow and discharge of wastewater from the city. Upstream of Wazirabad, the bulk



Delhi's growing traffic -- a contributor to pollution

out of grossly polluting vehicles, setting up a fuel testing laboratory for checking adulteration, construction of Sewage Treatment Plants (STPs) for municipal

of the water is withdrawn from the river for irrigation, drinking water supply and industrial uses. As such, the stretch flowing through the city does not have an adequate natural flow. The treated as well as untreated wastewater discharge through 22 drains constitutes the major source of water in the river stretch. With the shifting of industries, the discharge of toxic

pollutants has been reduced. With the upgradation of the sewage treatment capacity, the pollution load in the river has also reduced.

However, I admit, that all this is not enough. Unless the natural flow in the river is increased and wastewater after treatment is used for irrigation instead of letting it into the river, there cannot be any major improvement on this score.

Q: Are there any plans for improving the city's drainage water system, especially in densely populated localities?

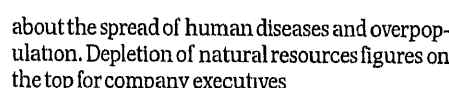
A: Yes, schemes have been taken up for the construction of

16 additional sewage treatment plants in different parts of the city. However, the sewer lines in some areas are silted up and these need de-silting and repair.

Abstract

INFORMATION technology is the most socially responsible sector in India. The alcohol and the tobacco industries are the least. People's trust is the highest in media and NGOs are the institutions working in the interest of society. MNCs and trade unions fare the worst. Companies are expected to provide good quality products, make their operations environmentally sound and reduce poverty. These are the findings of a recently conducted poll by the Tata Energy Research Institute (Teri). Co-authored by Ritu Kumar, David F Murphy and Viraal Balsari, *Altered Images: Understanding and Encouraging Corporate Responsibility in India* is still under publication.

Issues like overpopulation, environment problems, spread of human diseases, and depletion of natural resources are cited as the main problems facing the world. The order of concern varies from one group of respondents to another, though. The general public rates environmental problems and spread of human diseases as their primary concerns whereas workers are mostly concerned



will be more public pressure on companies to adopt more responsible practices, according to the authors.

ity, but has recently come in for considerable public criticism for its handling of hazardous waste at a thermometer factory in India.

Nevertheless, the company executives and general public rate the Tatas as the most responsible corporate for ethical behaviour, environmental care and social welfare schemes for the community. Good quality products and services, trusted brand and good employer image also count. Other responsible companies named include Reliance, Godrej, Bharat Heavy Electricals Ltd, Maruti, Southern Petrochemicals, and the Birla group. In contrast, Uniliver, Sony, Johnson & Johnson, Coca Cola, Procter & Gamble, Nestle, and Pepsi are called responsible only for their good quality products and services, and trusted brands.

While the poll findings claim to be an agenda setting exercise, the authors admit that there is a need for still greater understanding of what Indian and global companies are currently doing to demonstrate their responsibility towards the society, and identification of gaps that need to be addressed. Corporates willing

How did you conduct the poll?

Have not respondents stretched the definition of corporate social responsibility (CSR) quite a bit?

How do you explain the contradiction

I think this is an interesting contradiction and reflects the psyche of the public. Presently, they expect companies to do a lot by way of fulfilling their societal roles. However, when it comes to judgements, either by way of boycotts or positive actions, their considerations are quite different with price and brand quality being predominant influences. The important inference is for the future. If expectations follow the current trends, it is only a matter of time before public as well as other stakeholders begin judging companies in the same way. Current expectations are bound to lead to civil society pressures, which in turn will lead to change.

What are your recommendations?

I believe that a lot can be achieved through education and awareness raising. And in this there must be a role for the media, the government and the corporate sector. It is also important for business schools to introduce CSR as targeted courses in their curriculum so that the next generation of business executives has a good understanding of the issues. ♦

Oil and gas meet

NEW DELHI The proposed Indo-Iran gas pipeline project is likely to get a fresh impetus during Iranian petroleum minister Bijan Namdar Zangeneh's visit here to attend a two-day international oil and gas conference being organised by the Tata Energy Research Institute, from January 15. Energy majors from around the world are expected to weigh the regional and global impact of deregulation in India's oil sector at the conference. (NN)

For Delhi, I suggest, make CNG available...

Times News Network

11/59

NEW DELHI R A Mashelkar, director-general of the Council for Scientific and Industrial Research (CSIR), is the head of a committee set up to define the automobile fuel policy for the country. The committee released its interim report on January 1 which fuelled a lot of controversy. It was seen as a sell-out to transporters and the oil companies. Mashelkar spoke to Umesh Anand and Shubhagti Roy on Wednesday.

Q. Dr Mashelkar, what were the concerns you wished to address?

A. Our major concern was public health and the way it gets affected by air quality and what determines air quality, the state of in-use vehicles and not just the new vehicles, their relative population, fuel quality, inspection and maintenance, traffic management, landuse patterns. So the choice of auto fuel is just one consideration. Inspection and maintenance of old vehicles is also important. Therefore, this panel had a totally holistic view.

Q. You had a committee of experts...who were they?

A. We had the best of technical experts (elaborates on each of the experts' credentials).

Q. Who among them was a public health expert since public health happens to be your main priority?

A. Dilip Biswas and CPCB had done several studies regarding public health and air quality.

Q. But you are coming up with a fuel policy...wouldn't a public health expert be necessary in this?

A. (thinks) Principally yes, we had taken into account the studies which had been done exhaustively.

Q. There would be any number of studies...but one needs experts to put things in perspective..?

A. Well you have made a good point. Okay, I think you have made a point there, you have made a point.

Q. Everyone (in the committee), except you and Dilip Biswas, seems to have a foot here or there in the sector of petroleum and automobile sector..

A. What do you mean by a foot?

Q. A conflict of interest...

A. These people are scholars and academicians why should they do this. In fact, four of them are connected with environment. Biswas, Krishnan, Niyati and Pande.

Q. Biswas is from the government, Niyati is from private industry, Pande is a former secretary from ministry of environment, which is not known for its high level of efficiency. Would you really say these people are the best for defining the public interest?

A. It's like my being in the Intellectual Property Rights Commission and I there as R A Mashelkar, or CSIR DG, or a voice of government of India, so I presume that these people are giving these inputs, although there is a collective wisdom of the panel that works. I am there to scan and see if there are any angles as a Chairman that's my job.

Q. You have defined a road map, but it has been widely criticised for differing from Biswas' task force report. (This was an earlier inter-ministerial task force, IMTFE)

A. This is absolutely wrong. Biswas said Euro II in seven mega cities by 2004. We have said by 2003, a year ahead. For the entire country, they had said 2005. We say the same.

Q. You have said that Euro IV standards do not exist. This is not so. They are in use since 1999..

A. The problem with Euro IV is that the specifications have not all been decided even in Europe.

There are several specifications, not just sulphur and PAH (polycyclic aromatic hydrocarbons), but a total of 18 specifications are to be met. In Sweden, 10 parts per million (ppm) for sulphur has been specified, that is correct but others have not been set.

This is our interim report. We have gone in for evidence-based analysis. There was no data for how many vehicles come and ply from outside. We are conducting a study in all seven megacities. Whenever we are deciding something, we have to base it on actual data, not on emotions. I do not think we have diluted the reports of earlier committees.

Q. Do you think you have been completely misrepresented?

A. I think so.

Q. Even the Society for Indian Automobile Manufacturers had set stiffer targets than you have.

A. SIAM had made this commitment in 2000, when Euro IV was not even decided. They said we are ready to do this and ready to do that. Then they made a presentation to the industry ministry and were told that they were too ambitious and should go back and rework their targets. That never happened.

After that, SIAM was a part of the IMTF, and made a presentation to IMTF. Equally importantly, we heard SIAM and that report is the one on which

we have gone by

I am not talking about 2000 because in 2000 they were making certain promises that they could do certain things by 2005. But that same promise does not hold in 2001 or 2002.

Q. Do you mean to say that they are attacked on their earlier report, to the extent that you are reporting?

A. Absolutely. I have believed in total transparency in the entire process from day one. We have heard everybody including Reliance, IOC, TERI, CSF, SIAM and others.

Q. How many public health experts, institutions did you hear...?

A. Public health. I would say none. I would say none we have gone by public health studies.

This was not a new thing. Lot of water had already flown and we had to work by the terms of reference which were given to us.

Q. But Dr Mashelkar, we believe public health was the most important term of reference..

A. Let that be let that be.

Q. You have said in the report that CNG is in short supply domestically. How did your committee come to that conclusion?

A. (Thinks) Hmmmmmm these were basically the data provided by the (petroleum) ministry in terms of looking at the total requirement of CNG in the country, including industry. The issue which is being raised is of imports. Point no 18 mandatory substitution of liquid fuels with gaseous fuels will reduce the consumption of petrol and diesel which are surplus in the country. This may result in under-utilisation.

Q: This is a committee, acting in its independent capacity, did the committee tell the government that these delays are unacceptable as there are huge social costs in terms of public health?

Mashelkar: (keeps silent).

Q: It could have said this in its report, since public health was its primary concern.

Mashelkar: I think you have a good point there. Anyway, it's just an interim report. By the time, the final report is over, you'll see what are we going to do.

tion of processing facilities, crude or CNG cannot be looked at in isolation.

Q. Dr Mashelkar, you head a committee which has public health as its number one priority. We had a debate in this country on CNG, which is why this committee came into being. We are not the only country which is using CNG as the public transport fuel. When you make a statement that CNG is not available, what is the message you are sending out?

A. No, as far as CNG availability is concerned. In terms of available volumes, you are absolutely right.

Q. Would you say then that CNG is available?

A. Yes, CNG is available. There is no problem.

Q. Would you say CNG is available and CNG is a clean fuel which can be used for transportation?

A. No, not the second part. Let us first demystify the term clean fuel.

Q. Okay...environmentally acceptable fuel.

A. Yes, under certain conditions.

Q. What about this — CNG as a good, environmentally acceptable fuel used with the proper engine — is that the way to go?

A. No problem, absolutely no problem, with an appropriate engine.

Q. Why did we have the problem of distribution of CNG, did the committee cross-examine the government?

A. There were some representations made and the conclusion was that this problem should be sorted out as quickly as possible.

Q. Why the problem in the first place? Here we have a committee, it's a national committee representing the people of this country. It is supposed to ask the question to the government that you have a clean fuel, have been asked by the Supreme Court to

use this fuel and have given a committee to the court to provide the fuel and yet you don't... didn't the committee ask these questions to government?

A. Well, that's not quite correct. We asked the question. They admitted that there was a delay. That's all.

Q. Why the delays?

A. I won't like to go into those details and I don't represent the government.

Q. But you represent us.

A. Yes, I represent you.

Q. I am worried, that I have a government which is not ready to supply a clean fuel when it is...

A. I don't think the inference that we are trying to draw is correct. I have a feeling that somewhere on the other side many things that happen in India, there have been delays. That was the main conclusion I drew.

Q. This is a committee, acting in its independent capacity. Did the committee feel the government that these delays are unacceptable as there are huge social costs in terms of public health.

A. (Keeps silent)

Q. It could have said this in its report, since public health was its primary concern.

A. I think you have a good point there. Anyway, it's just an interim report. By the time, the final report is over, you'll see what are we going to do.

Q. You have talked of social cost, you have calculated the cost of refinery upgradation as Rs 17,000 crore. How did you come to that figure? How do you define social cost?



A. Social cost is not just cost of refineries, cars but also public health, people suffering from respiratory diseases, loss of efficiency etc. That part is not complete.

Q. Dr Mashelkar, how do we come to this figure...of Rs 17,000 crore for upgradation of refineries?

A. These have been detailed calculations, on the basis of technologies that will be required, equipments.

Q. They are a one-time expenditure?

A. Yes, one-time expenditure. Hydro desulphurisation plant etc. the mistaken impression is that all the refineries are capable of producing the 500 ppm sulphur.

Q. Which ones are capable?

A. At the moment only four of them Mathura, Refinery, Bharat Petroleum and Baidia. Which means Delhi can have it. Bombay and some parts of Baroda.

Q. Why harp on this cost, the impression the report creates is that the huge cost that the industry cannot bear...

A. No, no. I am sorry for that impression. We are saying you have to do it. The question doesn't arise. The only thing we are saying is that the cost will be different for different refineries. The northeast refineries will need a support.

Q. The popular perception is that you have emphasised that the cost for industry is too heavy to bear...because of this burden, the headlines for better engines and fuel can be deterred.

A. Noooo, that is not the issue at all. Because, the industry does require an investment from 32 to 36 months to be ready. Only four refineries are today capable of (producing 500 ppm diesel).

Q. But the report does not set them aside. It should set them aside. Maybe you could have norms for the cities to which they are supplying.

A. See, the issue is like this. If you say, the entire country is to be on Euro II by 2005 or Euro III by 2010 then you will have to look at all these refineries.

Q. That's true. But let's assume that there are huge cities which suffer from big problems. They are important growth centres. They drive the economy...It doesn't seem that the committee needs to address these issues.

A. I think, probably it did not get reflected very frankly.

Q. What does the committee want for Delhi, for instance?

A. For Delhi, all that we are saying that we need a multi-fuel, multi-technological option. But setting the emission norms which must be met. How do you meet them as your business.

Q. What do you want for Delhi given the high levels of pollution and serious concerns of public health? One estimate says that we are spending Rs 1,000 crore per year on account of pollution-related diseases.

A. I would suggest the following. Number one, as quickly as possible, make CNG available with the proper distribution system. Number two, get on to the right engines as quickly as possible avoiding the flaws. Third, if a diesel of a specification 500 ppm is available, then you would also require Euro II standard diesel engines. Only then, will you be able to meet the emission norms.

There is a popular perception that one may use the existing diesel and can meet the emission norms, that is not correct. You have to have the Euro II engine. If you use the particular combination of Euro II type diesel with Euro II quality engine, that is the option one should look into.

Other option, electric vehicles can also be used. In the final report, you will see the road map with the larger point of view. Within the time constraints of three months we had to defer some of the items.

Q. You have said Euro II fuel with Euro II engine, shall meet the Euro II standards. But we have a fuel and a technology which will leapfrog us to Euro IV. Why go for a Euro II then?

A. This is not just a policy for Delhi. This is for the entire country. I am not talking about Delhi at all. Why are we focussing on CNG and Delhi? **Q. It's because when you talk of a national policy it is interpreted in a way which can then be used to defer better technology.**

A. I think it's an issue of interpretation. Please clarify that I am for any fuel, for example if Delhi finds it is most optimal for it to use CNG along with with the requisite preconditions, I have absolutely no problem. I agree with you there (for environmentally acceptable fuel) but provided it is used properly but there are other fuels as well like ULSD that can be used with proper technology.

Q. You talk of tailpipe emissions, but we have a dismal record of measuring tailpipe emissions. What do you have to say to that?

A. We are talking of new vehicles, Euro II, III, IV. The problem is with the old vehicles and their emissions.

Q. But why go to end of the pipe, when you have solutions in the beginning. We have tried pollution under control (PUC) certificates...

A. We are going beyond it. We have an opportunity to suggest systems to dismantle the old systems and go for newer structures. We might learn from others. If this fundamental issue of inspection and maintenance is not addressed, even with CNG you will have problems.

Q. The world over, people have looked at the origin, rather than the end. Why are we shying away from enforcing stricter norms?

A. The possibility of getting 50 ppm diesel is being looked at. You will see that in the final report. For two-wheelers, we are examining stricter norms. But at what level should they be fixed up is what is being looking at by a group of eight persons. It will come in the final report. We are not at all shying away from stricter norms.

Q. If you see the record in court, the oil companies first said they could not give unleaded petrol, then they said they could not reduce sulphur. They finally did both. This is the pattern. There is popular feeling that you are not calling their bluff, you are not being strong enough.

A. No, no, no. That is wrong. I have four environmental experts.

Q. This is an interim report. Do you think too much attention has been given to an interim report. Do you think the government has acted in an unseemly haste?

A. My answer to that is, I have no comment.

Eco-clubs for MCD school students

ESHA ROY

NEW DELHI, JANUARY 9 • 1

THE Municipal Corporation of Delhi (MCD) has, for the first time, decided to introduce 'eco-clubs' in 1,000 primary schools it runs. The move comes soon after the success of the fire-cracker campaign.

MCD officials said the aim was to begin the clubs at 250 schools covering all the 12 MCD zones in the coming month. MCD has 20-30 schools in each zone and a total of 1,800 primary schools. The eco-club project begins under the umbrella of the larger Yamuna Action Plan that the MCD had initiated. The plan, which is being funded by the Japan Bank, is aimed at cleaning the Yamuna by setting up community toilet complexes, sewage treatment plants along the

banks of the Yamuna and several mini-sewage treatment plants.

MCD officials believe the project will be successful if children are mobilised. The Central Pollution Control Board (CPCB) had started a similar project in 1996 in many Delhi schools. CPCB Director Dilip Biswas said the idea behind the project was to "catch them young".

"It is essential to mobilise school children in any social movement as they are more receptive to ideas as well as challenges," said Biswas. CPCB had taken the initiative to start a number of eco-clubs in schools.

"One of the benefits of involving children is that once influenced, they play an important role in bringing about environmental consciousness in their family," said Biswas.

Ranjana Saikia of Tata Energy Research Institute (TERI), which has been entrusted the job of implementing the project, says while the previous projects had so far targeted high school students, Saikia met several MCD school principals today. "We told them how to go about setting up the clubs in their schools and what kind of activities to hold," said Saikia.

TERI will be arranging about 40 trips for the children, Saikia said. "They will be taken to the Yamuna. This itself ought to sensitise them. They will also be taken for various other field trips, including one to Delhi Bird Association, where they will be taught about migratory birds and what difference the pollution has made to these birds," Saikia said, adding that water testing kits will also be distributed in schools other than those in which the scheme is in operation.

ಪರಿಸರ ಪ್ರೇಮಿ ಕಟ್ಟಡ: ಇಂದು ಉದ್ಘಾಟನೆ

ಬೆಂಗಳೂರು ಜ 2- ಟಾಟಾ ಶಕ್ತಿ ಸಂಶೋಧನಾ ಕೇಂದ್ರ (ಟಿಇಆರ್‌ಎ) ನಿರ್ಮಿಸಿರುವ ಟೆರಿ ಪರಿಸರ ಪ್ರೇಮಿ ಕಟ್ಟಡವನ್ನು ಗುರುವಾರ ಮುಖ್ಯ ಮಂತ್ರಿ ಎಸ್.ಎಂ. ಕೃಷ್ಣ ಅವರು ಉದ್ಘಾಟಿಸಲಿದ್ದಾರೆ.

'ಕಟ್ಟಡಕ್ಕೆ ಶಿಲಾನ್ಯಾಸ ನೆರವೇರಿಸಿದ ಮುಖ್ಯ ಮಂತ್ರಿ ಎಸ್ ಎಂ ಕೃಷ್ಣ ಅವರೇ ತೆರೆಯ ದಕ್ಷಿಣ ಪ್ರಾಂತ್ಯದ ಕೇಂದ್ರ ಸಿಟಿಯ ನೂತನ ಕಟ್ಟಡವನ್ನು ಉದ್ಘಾಟಿಸಲಿದ್ದಾರೆ ಎಂದು ಇಂದು ಸಂಜೆದ ಪತ್ರಿಕಾಗೋಷ್ಠಿಯಲ್ಲಿ ಟೆರಿ ನಿರ್ದೇಶಕ ಡಾ ಆರ್ ಕೆ ಪಟೇರಿ ಅವರು ತಿಳಿಸಿದರು.

ಪ್ರಕೃತಿದತ್ತವಾಗಿ ಲಭ್ಯವಾಗುವ ಘನೀಕೃತ ಬೆಳಕು ಗಾಳಿ ನೀರು ಭೂಮಿ ಮತ್ತು ಆಕಾಶವನ್ನು ಅವಲಂಭಿಸಿ ನಿರ್ಮಿಸಲಾಗಿರುವ ಈ ಕಟ್ಟಡಕ್ಕೆ ಹೆಚ್ಚಿನ ಸಿದ್ಧತೆ ದೀಪಗಳ ಅವಶ್ಯಕತೆ ಇರುವುದಿಲ್ಲ ಇಲ್ಲಿರುವ ಪ್ರತಿ ಕೋಣೆಗೂ ಘನೀಕೃತ ಬೆಳಕು ತಲುಪುತ್ತದೆ ಸ್ವಚ್ಛಗಾಳಿ ಒಂದು ಮೂಲೆಯಿಂದ ಇನ್ನೊಂದು ಮೂಲೆಗೆ ಸರಾಗವಾಗಿ ಚಲಿಸುತ್ತದೆ ಹೀಗಾಗಿ ಕಟ್ಟಡ ಮಾವಾಗಲೂ ತಂಪಾಗಿರುತ್ತದೆ ಈ ನಿರ್ಮಾಣವನ್ನೇ ಗಮನದಲ್ಲಿಟ್ಟು ಕೊಂಡು ಈ ಕಟ್ಟಡವನ್ನು ನಿರ್ಮಿಸಲಾಗಿದೆ ಎಂದು ಅವರು ತಿಳಿಸಿದರು.

ಸಾರ್ವಜನಿಕರಿಗೆ ಈ ಕಟ್ಟಡವನ್ನು ವೀಕ್ಷಣೆಗೆ ಮುಕ್ತವಾಗಿರಿಸಲಾಗಿದೆ ಬೆಂಗಳೂರಿನ ಕಟ್ಟಡ ನಿರ್ಮಾಣಕರ್ತರು. ಕಟ್ಟಡ ನಿರ್ಮಾಣಗಾರರು ಸೇರಿದಂತೆ ಕಟ್ಟಡ ನಿರ್ಮಾಣದಲ್ಲಿ ಆಸಕ್ತಿ ಹೊಂದಿರುವ ಜನರಿಗೆ ಈ ಮಾದರಿಯ ಕಟ್ಟಡ ನಿರ್ಮಾಣ ಕುರಿತಂತೆ ಸಂಜೆ ಮತ್ತು ಮಾರ್ಗದರ್ಶನ ನೀಡಲಾಗುವುದು ಎಂದು ಅವರು ತಿಳಿಸಿದರು.

ವಿವಿಧ ರೀತಿಯ ಹವಾಮಾನಕ್ಕೆ ಅನುಗುಣವಾಗಿ ಕಟ್ಟಡದೊಳಗಿನ ಹವಾಮಾನವನ್ನು ಪರಿವರ್ತಿಸಿ ಗೊಳಿಸಿಕೊಳ್ಳುವ ಈ ಕಟ್ಟಡವನ್ನು 295 ಕೋಟಿ ರೂಪಾಯಿ ವೆಚ್ಚದಲ್ಲಿ ನಿರ್ಮಿಸಲಾಗಿದೆ ಇಂತಹ ಕಟ್ಟಡ ನಿರ್ಮಿಸಲು ತಗಲುವ ವೆಚ್ಚ ಹೆಚ್ಚು ಕಮ್ಮಿ ಸಾಂಪ್ರದಾಯಿಕ ವಿಧಾನದಲ್ಲಿ ನಿರ್ಮಿಸಲಾಗುವ ಕಟ್ಟಡಕ್ಕೆ ತಗಲುವ ವೆಚ್ಚದಷ್ಟೇ ಇರುತ್ತದೆ ಎಂದು ಅವರು ತಿಳಿಸಿದರು.

ಇದುವರಗೂ ಬಹುರಾಷ್ಟ್ರೀಯ ಸಂಸ್ಥೆ ಹಾಗೂ ಭಾರತದ ಪ್ರತಿಷ್ಠಿತ ಕಂಪೆನಿಗಳಿಗಾಗಿ 400ಕ್ಕೂ ಹೆಚ್ಚು ಕಟ್ಟಡಗಳನ್ನು ನಿರ್ಮಿಸಿಕೊಡಲಾಗಿದೆ ಇಂತಹ ಕಟ್ಟಡವನ್ನು ನಿರ್ಮಿಸಿಕೊಡುವಂತೆ ಕೇಂದ್ರ ಮತ್ತು ರಾಜ್ಯದ ಸರ್ಕಾರಿ ಇಲಾಖೆಗಳು ಹಾಗೂ ಖಾಸಗಿ ಮತ್ತು ಸಾರ್ವಜನಿಕ ವಲಯಗಳಿಂದಲೂ ಬೇಡಿಕೆ ಬಂದಿದೆ ಎಂದು ತಿಳಿಸಿದರು.

Energy-efficient utility centre at Domlur

Express News Service

Bangalore, Jan 7

WOULD the thought of a house that helps have modest electricity bills, recharge ground water, tackle water scarcity, and make up for the greenery lost in construction, be wishful thinking?

Well! Tata Energy Research Institute's (TERI) new office at Domlur, in Bangalore, fulfills the aforementioned requirements, in spite of being built near a sewer.

While it may not be home, it is an example of how buildings can be built to save energy. Chief Minister S M Krishna inaugurated the new building, last week, and commended the concept.

Its exterior does not have the looks of an eco friendly building, but it sure sets an example to companies that intend to cut their expenditure.

TERI's building at Domlur is the southern regional centre for the institute. It will hold energy audits for industries, scrutinise their project reports to 'incorporate energy-efficient parameters', and help introduce energy management parameters.

The Centre for Renewable Energy and Environmental Studies offers help in policy

analysis and regional environmental assessment. It will also offer consultation services for carrying out projects on wind energy, hydro energy and waste-to-energy conversion.

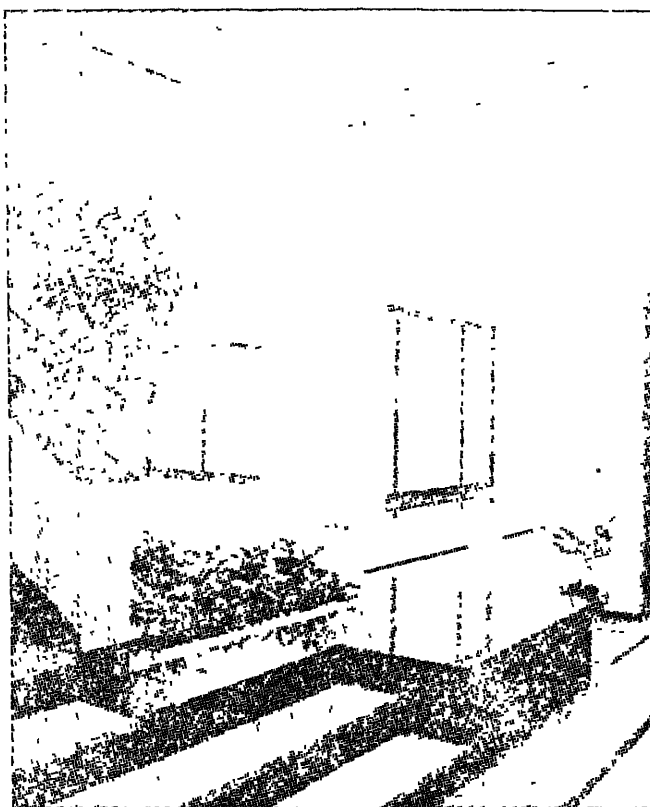
"One of the biggest troubles with the site is its location. A storm-water drain from the Ulsoor Lake to Challaghatta runs along it, with the wind blowing in enough for a smell," says TERI Chairman A Ramachandran.

The design has created room for minimal artificial lighting during the day with atrium skylights. The effect is a soft flow of light in most of its interiors. "Natural daylight enters the heart of the building." The office accommodates 75 workstations.

TERI officials say they conducted a detailed daylight study before making the design.

A sump has been built to collect rain water from its roof and from the 'paved area'. This water is used for landscaping, TERI officials say. A terrace garden will be used to make up for the 'greenery lost in construction'.

The kitchen need not suffer if there is no cooking gas. A part of the roof is used for solar water heaters. Tata Energy Research Institute plans to build a solar roof soon, with the



The interiors of the new southern Regional Centre building of Tata Energy Research Institute — File photo

sun's energy to be used to light the building at night.

To avoid the smell of the sewer in the south, the building opens towards the north. On the southern side is an absorptive double-wall that insulates the building with 'the southern

sun'. The foul-smelling air flows over the building and away, and 'free' air flow from the ground to terrace.

If you have a building close to a sewer, follow the TERI example. It helps. At least TERI thinks so.

Charge of the green brigade

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A MIDST the big fish on the energy scene, there is a minnow called renewable energy that has tremendous potential and great benefits if implemented on a wide and sustainable basis

Internationally, almost all energy requirements are met by burning non-renewable resources like coal, fuel-oil, LNG, and to a lesser extent nuclear fuels. But these projects are gas-guzzlers which have repercussions for the environment.

Green is in, as is the realisation that in countries like India, where access to grid power is not always possible (especially in far-flung areas), local projects using renewable resources like biomass, wind, solar energy or water may better meet the needs of the people.

At present, out of a total installed capacity of almost 100,000 MW, only 3,000 MW is generated using various renewable resources. But international comparisons show India up very favourably: installed wind power capacity is 1,267 MW, India ranks fifth, small hydel power capacity is 1,341 MW, India ranks tenth, biomass-based power is 273 MW and our rank is fourth, biomass gasifiers generate 35 MW and we rank first.

Interestingly, the approximate potential of renewable resources is 100,000 MW! According to a TERI official, "India has one of the largest demonstration programmes in the world". So what prevents the conversion of this potential into actual installed capacity?

Firstly, renewable resources are positioned as complements to traditional sources, wherever grid power is difficult to reach, non-renewable resources are tapped. Secondly, the technology for exploiting renewable resources is expensive, and, as in all initial developmental projects, costs can only go down if there are economies of scale.

Even if costs are competitive, there are climatic factors that are crucial to power generating capacity: photovoltaic cells don't work on a cloudy day, and windmills don't mill the wind without a breeze. Yet, wind power can be provided at Rs 3-3.50 per unit.

But to generate enough wind-based power to supply to the grid, acres of space along with high cost equipment is required. On the up side, one has to do nothing at all to generate electricity, just wait for the wind.

Says the TERI official, "The government has recognised the various aspects of exploiting renewable sources of energy, and under the New Renewable Energy Policy (NREP), it envisages that by 2012, 10 per cent of total addition to generation capacity will be from renewable resources." Given that the government wants to add another 100,000 MW by 2012, this means between 10-12,000 MW from renewable fuels, about 13-15,000 MW in all. This is still 6-7.5 per cent of all power generated.

Is this an achievable target? Going by impressions of people concerned with renewable energy, the target is optimistic, and

TIMES OF INDIA

SUNDAY

- 7 - 1992

Appointment of consultants for energy policy kicks up row

By **Ashley D'Mello and Baiju Kalesh**
Times News Network

MUMBAI A row is brewing between the power ministry and the mandarins in the planning commission over the appointment of consultants to prepare plans for the national energy policy. The former has appointed Tata Energy Research Institute (TERI), New Delhi, while the latter has asked international consultancy firm, McKinsey and Co for the purpose. This has led to rumblings in the power ministry.

Senior government officials said that the ministry of power had appointed R K Pachauri of TERI to prepare the plan for the energy policy. Mr Pachauri prepared a comprehensive plan and later made a presentation to Prime Minister Atal Behari Vajpayee and senior ministers from the ministries of mines, petroleum and coal. The ministers were pleased with the way in which the whole issue was handled especially the environmental aspect as also the issue of providing adequate energy security for the country, they added.

The TERI report is to be made public shortly and might lead to spats at senior levels in the government.

When an Indian organisation which has expe-

rience in the field has already prepared a plan why bring in an MNC to do the same, question senior government officials.

The plan prepared by TERI has kept the Indian environment situation in mind, the government officials claim. India is a low energy consumer, if an agency were to put energy consumption on par with Western standards, what would happen to natural resources and the environment, they ask.

The TERI plan apparently takes the history of the environment into consideration and deals with these issues at various levels. The issue of people-displacement and whom the projects will serve is also dealt with. At a time when power projects are being opposed by the public in various parts of the country, an organisation familiar with the country is needed, they state.

On the issue of energy security, it was felt that the country needed to be sufficient in energy needs as far as possible due to tensions on the border. The TERI plan has dealt with this aspect in a competent manner, the officials feel.

The government officials concede that McKinsey will bring in foreign experts and give a large report which would be accepted by Western agencies.

Green Ambassadors

WHERE issues like environment are concerned, children are considered to be the best bet. If regard and concern for a clean and green environment is inculcated in children from the beginning, future certainly looks safe and bright. This has already been exemplified, by the success of campaigns against fire crackers on Diwali, use of poly bags etc.

Still, a lot needs to be done. Pollution has spread to all the three spheres — water, land and air, endangering the lives of plants and animals on this planet. Adults may grow insensitive towards maintaining the ecosystem, but children should and have to preserve it for their own benefit.

A number of organisations are working towards this goal. CAMPS (Community Adoption and Monitoring Programmes for Schools), a project being executed by the Ministry of Environment and forests, Government of India, with funding from the UNDP and the Public affairs section of the US embassy and Teri (Tata Energy Research Institute) is a step in this direction. Teri started the CAMP in November 1999 and it will go on till August 2001. Under this program, activity-oriented workshops, seminars, and special events will be held to implement the programme in ten schools, namely Kendriya Vidyalaya, Andhra Education society, Lovely Public School to

St Marks School

Terraviva is a series of films on environment is screened for children which will make them conscious of their surroundings in more than one way. **Green Olympiad** is another one of the major events that has helped in propagating the idea of keep the earth green. "It's one of its kind Olympiad which through quiz not just tests the intelligence of kids but at the same time helps in increasing the awareness of students in terms of the world they

degradation as their school fields were always adjacent to a busy road. This made them vulnerable to pollution more than anybody else. And as they are the future citizens providing awareness and environmental consciousness in their mind could be passed on to the community which in turn helps the process of development to gain a global character and do a great job of



live in" says Anapurna from Teri. The schools are located in 10 areas ranging from JNU to INA which in a way represent the geographical landmarks of the city.

It was observed that children were being affected by environmental

making the environment better.

Terraquiz is a national level environment quiz which will be telecasted on January 13 in which best 32 schools selected through olympiad will be quizzing live on television.

A play was performed by school

students on how pollution was affecting the young minds. It made them conscious of what has to be done about the fast depreciation of atmosphere and the threat by the pollution which has to be seriously controlled.

Focus of the CAMP will be on pro-



MAKING A DIFFERENCE: School children from Delhi (right) stage a play, highlighting the ill-effects of pollution on them and the participating students (below) in CAMP Teri, interact at grass root level, to generate awareness towards protecting the environment.

moting children as major agents of change. These future citizens are empowered with information to cultivate greater awareness, concern and interest about the environment by going out to the community people and telling them about how to keep their environment clean with the help of MCD.

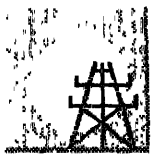
In context of the workshops held by Teri, Suleena Septra, a teacher at D P S R. K. Puram says, "Making children aware of their atmosphere and making them environment conscious not only interests the students but at the same time helps them develop into better individuals. CAMP Teri is definitely putting up a good show." Reema De, a teacher at Army Public school believes, "Teri has enlightened a new spirit in the kids which has made their understanding of their surroundings clear."

Children are the future of the country, everyone knows. But it is difficult to make the children understand this bit. With the help of organisations like Teri, students are realising their responsibility. This made them understand the importance of car-pool and at the same time organise paper bag making-competitions and going out to the community people to make them aware of such environmental issues. With such endeavours from part of children and adults alike, the world can certainly be a better place to live in.

—Swati Singh

Charge of the green brigade

Renewable energy is still a minnow in the power pool but its potential is impressive



AMIDST the big fish on the energy scene, there is a minnow called renewable energy that has tremendous potential and great benefits if implemented on a wide and sustainable basis. Internationally, almost all energy requirements are met by burning non-renewable resources like coal, fuel-oil, LNG, and to a lesser extent nuclear fuels. But these projects are gas-guzzlers which have repercussions for the environment. Green is in, as is the realisation that in countries like India, where access to grid power is not always possible (especially in far-flung areas), local projects using renewable resources like biomass, wind, solar energy or water may better meet the needs of the people.

At present, out of a total installed capacity of almost 100,000 MW, only 3,000 MW is generated using various renewable resources. But international comparisons show India up very favourably. Installed wind power capacity is 1,267 MW, India ranks fifth, small hydel power capacity is 1,341 MW, India ranks tenth, biomass-based power is 273 MW and our rank is fourth, biomass gasifiers generate 35 MW and we rank first. Interestingly, the approximate potential of renewable resources is 100,000 MW!

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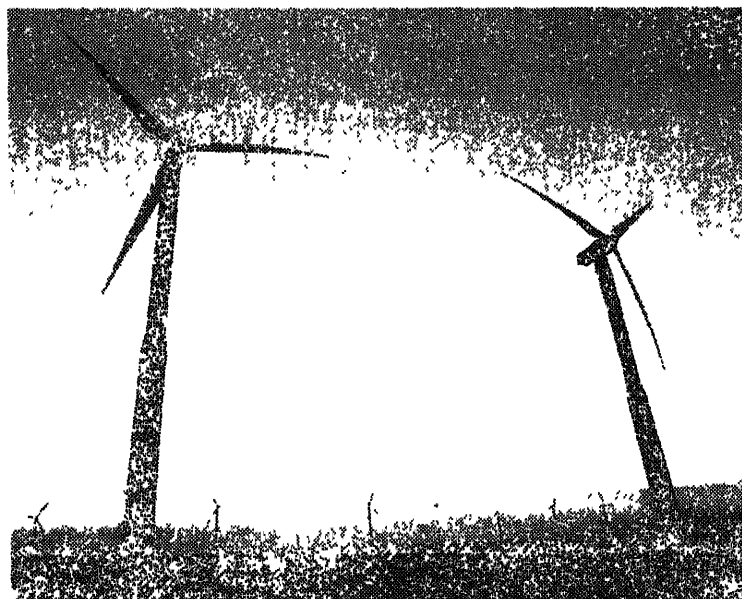
Firstly renewable resources are positioned as complements to traditional sources, wherever grid power is difficult to reach, non-renewable resources are tapped. Secondly the technology for exploit-

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India's Renewable Roster



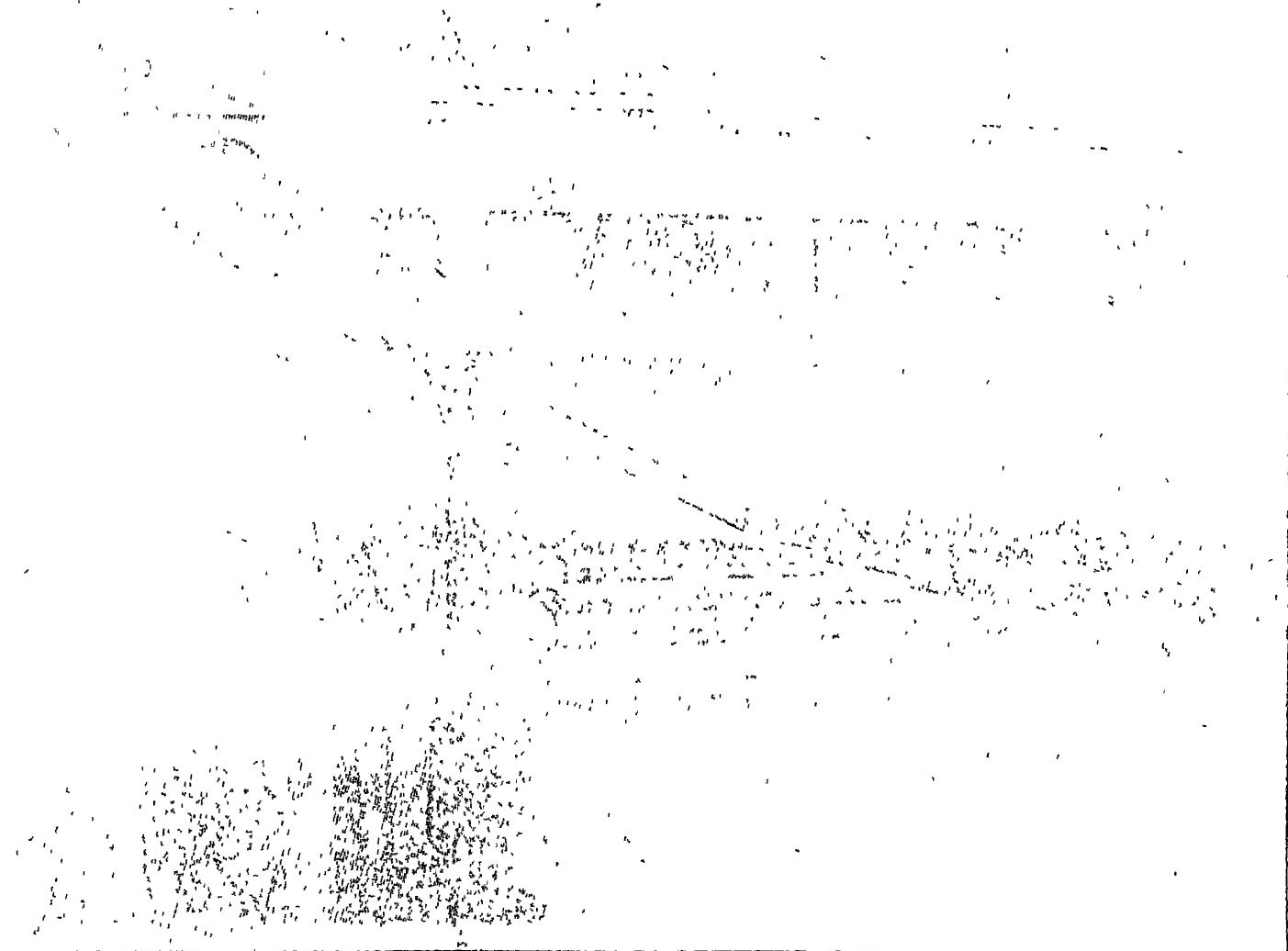
Total installed power capacity:	Almost 100,000 MW
Amount generated by renewable resources:	3,000 MW
Installed wind power capacity:	1,267 MW (India ranks 5th in the world)
Small hydel power capacity:	1,341 MW
Biomass-based power generation:	273 MW
Biomass gasifiers:	35 MW
Approx potential of renewable resources:	100,000 MW

is still 6-7.5 per cent of all power generated.

Is this an achievable target? Going by impressions of people concerned with renewable energy, the target is optimistic, and can only be achieved if various enabling mechanisms are put in place. "Marketing products like solar cells, lanterns and street lights, biogas plants etc needs awareness and education about the various aspects of green energy. For example in many villages, people refuse to believe that solar power is 'real' power. They want 'real' power that comes over transmission lines", adds the TERI official. Clearly a lot needs to be done before renewable resources become widely used, though non-renewable resources will continue to occupy central status in power generation.

■ Mohammad Adil

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DH photo

Chief Minister S M Krishna, Information Technology Minister Prof B K Chandrashekar, Tata Energy Research Institute (TERI) Chairman Dr A Ramachandran and TERI Director General Dr R K Pachauri at the eco-friendly building complex in Bangalore housing the office of the Southern Centre of TERI. The building was inaugurated today.

Load-shedding inevitable, says Krishna

DH News Service

BANGALORE, Jan 3

Chief Minister S M Krishna today indicated that load-shedding may become inevitable due to poor water storage in the reservoirs attached to hydel stations in the state

Mr Krishna said the State might have to face shortage of power during the next three months and the demand for additional power in rural areas would be more for irrigation due to failure of the monsoon

"However, efforts are being made to cope with the shortfall through buying power from neighbouring states and from the national power grid," he said while talking to reporters after the inauguration of an eco-friendly building complex of the Southern Centre of the Tata Energy Research Institute (TERI) here

Earlier, speaking at the programme, Mr Krishna, referring to the whopping transmission and distribution losses, said the loss has risen to 38 per cent from 17 per cent in less than three years "I am unable to understand how this whopping increase has taken place"

Mr Krishna said meeting energy requirement was the biggest challenge the country was facing and added that the restrictions imposed by the Centre on purchase of power from other States had added to the grim situation

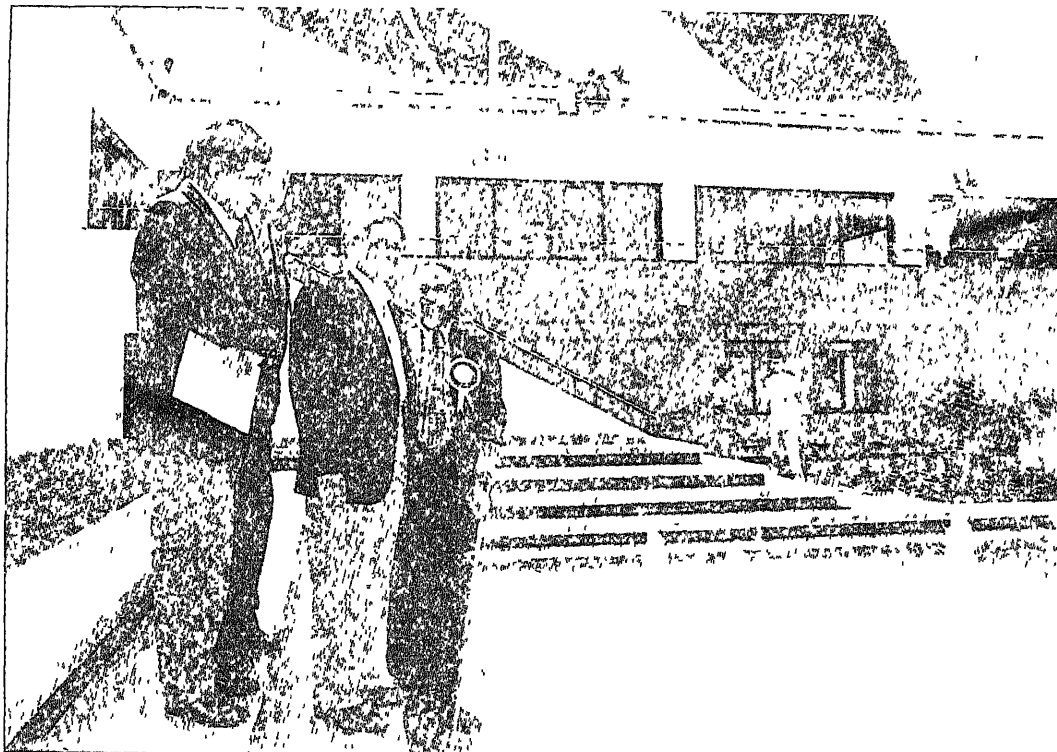
Referring to the demand for uninterrupted power supply for at least eight to 10 hours in villages, he just said "Power supply to rural areas has become complicated"

However, he said he had suggested to the Karnataka Power Transmission Corporation Limited (KPTCL) to take appropriate steps to ensure supply of reasonable quality power to rural areas

Appreciating the TERI's environmentally benign building complex, Mr Krishna said "We are committed to take up sustainable development and stop the degradation of environment"

4 NEWS

DECCAN HERALD, FRIDAY, JANUARY 4, 2002



DH photo

Chief Minister S M Krishna, Information Technology Minister Prof B K Chandrashekar, Tata Energy Research Institute (TERI) Chairman Dr A Ramachandran and TERI Director General Dr R K Pachauri at the eco-friendly building complex in Bangalore housing the office of the Southern Centre of TERI. The building was inaugurated today.

Load-shedding likely: CM

■ We will buy power from wherever it is available: Krishna

Express News Service

Bangalore, Jan 3

CHIEF Minister S M Krishna on Friday said that there could be a serious power shortage in the coming two months in Karnataka as hydel reservoirs remained half-filled after inadequate rainfall last monsoon. He indicated that load-shedding might become inevitable.

"We will buy power from wherever (it is) available," Krishna said, while inaugurating the Rs 2.95 crore eco-friendly, energy efficient regional office complex of the Tata Energy Research Institute (TERI) in Domlur here.

Though power could be

bought from neighboring States, it is difficult to transmit it to the most needy places, he said. "Resources for making power available are also limited," he said.

In short, the State is facing a severe power shortage that would especially hit rural areas, which might need additional power for irrigation in light of the continuing water shortage.

"Whenever I visit rural areas, I am confronted with villagers' demand for better power supply," Krishna said. Six hours of continuous power supply and non-stop three-phase supply overnight is the norm for villages. "They ask for eight to ten hours of supply," Krishna said.

"I can only suggest that authorities take appropriate steps and ensure that rural Karnataka is not harshly dealt with," the CM added.

Praising TERI research into renewable energy and their energy-efficient new building, Krishna pointed out that transmission and distribution losses in the State was around 38 per cent. "Some time ago I was told that it was only 18 per cent. I cannot understand how there can be such a sharp increase," he said. Krishna suggested that the chairman of the Karnataka Electricity Regulatory Commission (KERC), who was among the audience, must enlighten the people about this.

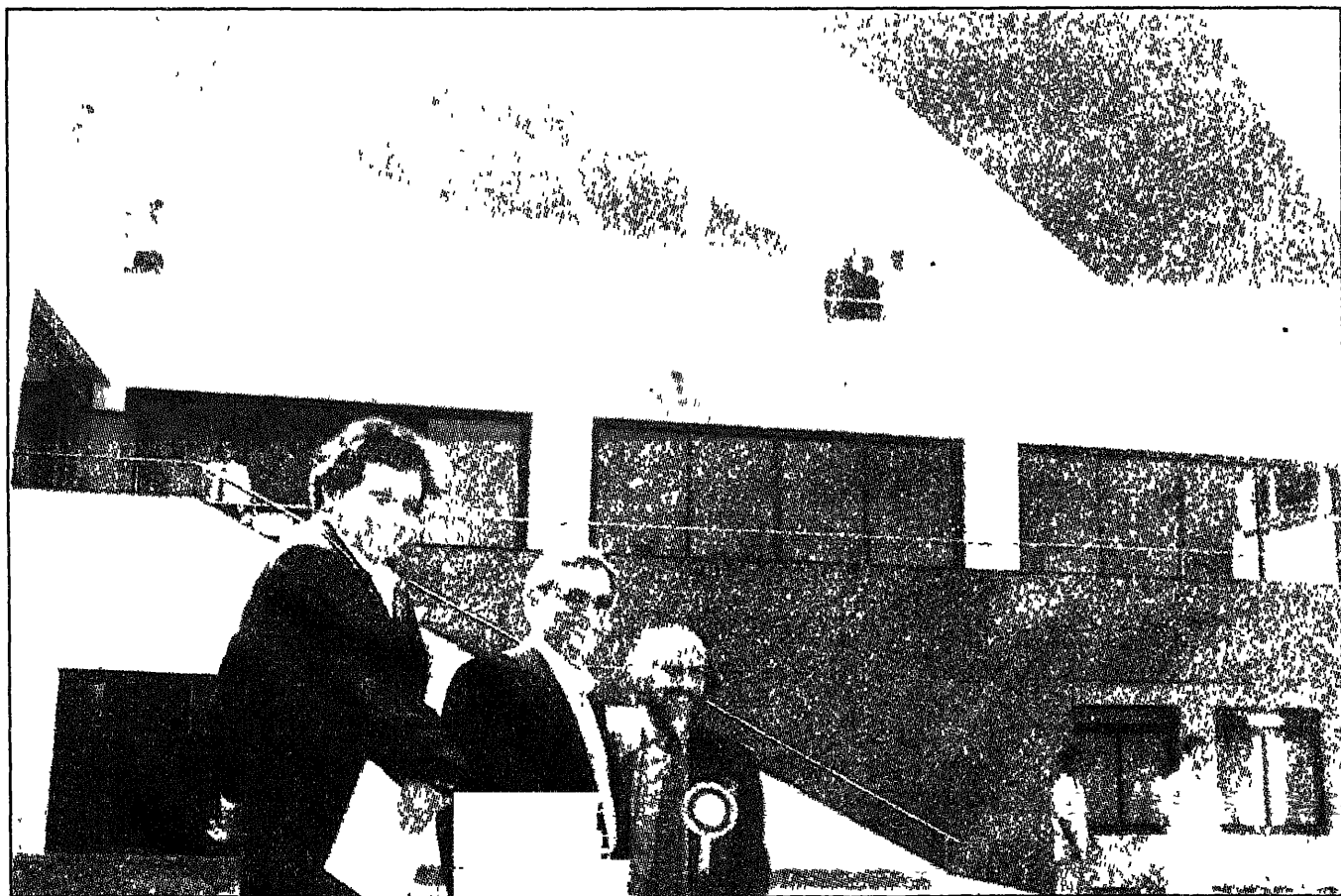
Krishna said that KPTCL has to take immediate steps to improve its efficiency and competence.

Minister of State for Information Technology (IT) Prof B K Chandrashekar said that the IT sector in the City was a major consumer of power. According to him, IT as well as biotech industries should adopt eco-friendly measures for optimal

energy use. He stressed the need to bridge the digital divide, with corporate help and said that work for the proposed biotechnology park would start in another three weeks.

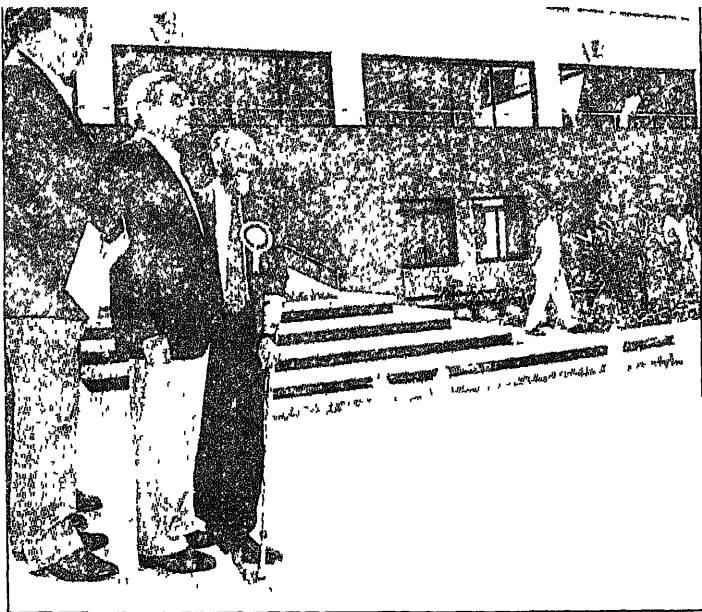
TERI Director General R K Pachauri offered to facilitate the use of energy saving and eco-friendly technologies for industry as well as government. He also proposed to clean up a filthy open drain beside TERI building with the help of upstream stakeholders, corporates and the government.

TERI chairman A. Ramachandran explained how the new building made best use of daylight and cut energy bill by the use of soil lining, ventilation, heat sinks. Solar water heaters provide all hot water needed and solar cell panels contribute to electricity, while roof ponds and fountains aid rainwater harvesting and provide cooling effect, he added.



Chief Minister S M Krishna, Information Minister B K Chandrashekar and the Director-General (TERI), R K Pachauri in front of TERI's eco-friendly building, which was inaugurated by the CM in Bangalore on Thursday

— Express Photo by Saggere Radhakrishna



Chief Minister S.M. Krishna and Information Technology Minister B.K. Chandrashekar take a look at the Tata Energy Research Institute's Southern Regional Centre complex which was inaugurated at Domlur in Bangalore on Thursday.

Darker days ahead, CM tells consumers

Times News Network

BANGALORE Chief Minister S.M. Krishna on Thursday warned consumers to expect an "extremely difficult" power situation in the coming months.

Inaugurating the Tata Energy Research Institute's (TERI) Southern Regional Centre at Domlur, he said the energy sector is the government's biggest challenge. Transmission loss is "both appalling and depressing. The loss was 18 per cent four years ago but has jumped to 38 per cent now."

Last year was very unfortunate as reservoirs were half full. It is tragic that rain gods haven't been very useful to the state, but the government is making all efforts to mitigate the power crisis, the CM said.

The government is trying to purchase power. But there are several constraints, including lack of funds and transmission from other parts of the country. The government is also worried about the quality and duration of power provided to rural Karnataka.

"Rural Karnataka gets three-phase power supply of six hours and farmers are asking for two more hours. I have told authorities to take appropriate steps so that rural Karnataka is not harshly dealt with."

Admitting that several corporate houses and companies are looking at alternate sources of power supply, Krishna contended that the trend had changed over the last few months. "I am conscious of the KPTC's efforts to improve efficiency, competency and transmission. Quite a few companies are coming back to KPTC for power, which is a good sign," he said.

Information Technology Minister B.K. Chandrashekar hoped corporate houses would emulate TERI in building eco-friendly constructions.

HC upholds site allotment

Times News Network

BANGALORE: The Karnataka High Court has upheld the Bangalore Development Authority (BDA)'s allotting portion of a civic amenity site in Domlur Layout, II Stage, on the outskirts of Bangalore to Delhi-based Tata Energy Research Institute (TERI).

Chief Justice N.K. Jain and Justice N. Kumar on Thursday dismissed a writ petition by K. Narayanappa and four other residents of Domlur challenging the resolution of January 13, 1996. The petitioners contended that CA-12 site was a CA site and BDA had notified 1,838 sq m of the site for allotment.

According to the civic amenity sites allotment rules, only educational institutions under the Karnataka Co-operative Societies Act or the Society's Registration Act, are eligible for allotment.

But the BDA in violation of the rules had made the impugned allotment ignoring a number of applications made by eligible institutions, the contended.

TERI said it is a society registered in Punjab under the Society's Registration Act with its head office in Delhi and branch in Bangalore.

Charge of the green brigade

Renewable energy is still a minnow in the power pool but its potential is impressive



AMIDST the big fish on the energy scene, there is a minnow called renewable energy that has tremendous potential and great benefits if implemented on a wide and sustainable basis. Internationally, almost all energy requirements are met by burning non-renewable resources like coal, fuel-oil, LNG, and to a lesser extent nuclear fuels. But these projects are gas-guzzlers which have repercussions for the environment. Green is in, as is the realisation that in countries like India, where access to grid power is not always possible (especially in far-flung areas), local projects using renewable resources like biomass, wind, solar energy or water may better meet the needs of the people.

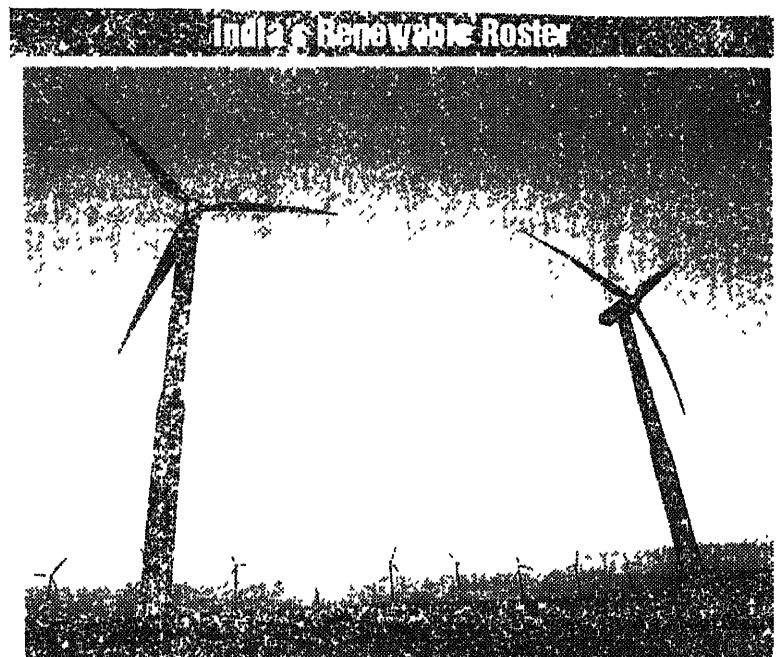
At present, out of a total installed capacity of almost 100,000 MW, only 3,000 MW is generated using various renewable resources. But international comparisons show India up very favourably. Installed wind power capacity is 1,267 MW, India ranks fifth, small hydal power capacity is 1,341 MW, India ranks tenth, biomass-based power is 273 MW and our rank is fourth, biomass gasifiers generate 35 MW and we rank first. Interestingly, the approximate potential of renewable resources is 100,000 MW! According to a TERI official, "India has one of the largest demonstration programmes in the world". So what prevents the conversion of this potential into actual installed capacity?

Firstly renewable resources are positioned as complements to traditional sources, wherever grid power is difficult to reach, non renewable resources are tapped. Secondly the technology for exploit-

ing renewable resources is expensive, and, as in all initial developmental projects, costs can only go down if there are economies of scale. Even if costs are competitive, there are climatic factors that are crucial to power generating capacity, photovoltaic cells don't work on a cloudy day, and windmills don't mill the wind without a breeze. Yet, wind power can be provided at Rs 3-3.50 per unit.

But to generate enough wind-based power to supply to the grid, acres of space along with high cost equipment is required. On the up side, one has to do nothing at all to generate electricity, just wait for the wind.

Says the TERI official, "The government has recognised the various aspects of exploiting renewable sources of energy, and under the New Renewable Energy Policy (NREP), it envisages that by 2012, 10 per cent of total addition to generation capacity will be from renewable resources". Given that the government wants to add another 100,000 MW by 2012, this means between 10-12,000 MW from renewable fuels, about 13-15,000 MW in all. This



Total installed power capacity:	Almost 100,000 MW
Amount generated by renewable resources:	3,000 MW
Installed wind power capacity:	1,267 MW (India ranks 5th in the world)
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Biomass-based power generation:	273 MW (India ranks 4th)
Generation by biomass gasifiers:	35 MW (India ranks 1st)
Approx potential of renewable resources:	100,000 MW

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is still 6-7.5 per cent of all power generated.

Is this an achievable target? Going by impressions of people concerned with renewable energy, the target is optimistic, and can only be achieved if various enabling mechanisms are put in place. "Marketing products like solar cells, lanterns and street lights, biogas plants etc needs awareness and education about the various aspects of green energy. For example in many villages, people refuse to believe that solar power is 'real' power. They want 'real' power that comes over transmission line." adds the TERI official. Clearly a lot needs to be done before renewable resources become widely accepted, though non-renewable resources will continue to occupy central status in power generation.

■ **Mohammad Adil**

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4 JAN 2002

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Express News Service

Bangalore, Jan 3

CHIEF Minister S M Krishna on Friday said that there could be a serious power shortage in the coming two months in Karnataka as hydel reservoirs remained half-filled after inadequate rainfall. "With the winter months becoming inevitable

"We will buy power from wherever (it is) available," Krishna said, while inaugurating the Rs 2.95 crore eco-friendly, energy efficient regional office complex of the Tata Energy Research Institute (TERI) in Domlur here

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— Express Photo by Saggere Radhakrishna

TERI'S SOUTHERN REGIONAL CENTRE COMPLEX OPENS TODAY

It's tradition & technology under one roof

Times News Network

BANGALORE Daylight streaming through a huge skylight till the heart of the building an efficient rainwater harvesting system, a five KV solar photovoltaic system to meet good part of power requirement. These are some of the salient features of the newly-constructed Southern Regional Centre complex of the Tata Energy Research Institute (TERI) in Bangalore.

Speaking to reporters on Wednesday, TERI Director-

General R K Pachauri said the super-speciality structure with state-of-the-art facilities is eco-friendly, energy-efficient and a model for sustainable development. "This is the outcome of a judicious blend of traditional knowledge and modern science and technology. This is first of its kind in South Asia," he claimed.

The complex, constructed in an area of 25,000 sq ft and for Rs 2.95 crore in record seven months will be inaugurated by Chief Minister S M Krishna on Thursday.

It's imaginative design is drawn from an interplay of the built form with five basic elements — sky, earth, water, air and sun. "It has been fashioned in a way that all thermal, visual and aural comfort for users have been taken care of," he added.

"We propose to erect a solar roof where a series of photovoltaic panels integrated into the roof to capture the sun's energy, will be stored in a bank of batteries. This will be the main source of power at night."

The complex has also run-off

from the roofs and the paved area is collected and stored in terrace tanks and collection sumps. "This water will be purified and reused for irrigation, landscaping and laundry," he added.

Pachauri claimed many leading companies such as IOC, CII have sought TERI's consultancy services. There are plans to conduct workshops for architects and it intends to work closely with government agencies, NGOs as well as the industry as a catalyst for sustainable development.

ಗ್ರಾಮಾಂತರ ಪ್ರದೇಶಗಳಲ್ಲಿ 10ಗಂಟೆ ವಿದ್ಯುತ್ : ಮುಖ್ಯಮಂತ್ರಿ ಪ್ರಕಟಣೆ

ಬೆಂಗಳೂರು: ರಾಜ್ಯದ ಗ್ರಾಮಾಂತರ ಪ್ರದೇಶಗಳಿಗೆ ರಾಜ್ಯಸರ್ಕಾರ ನೀಡುತ್ತಿರುವ 6ಗಂಟೆಗಳ ವಿದ್ಯುತ್‌ನಿಂದ ಜನತೆ ತೀವ್ರ ತೊಂದರೆ ಅನುಭವಿಸುತ್ತಿರುವುದು ಸರ್ಕಾರದ ಗಮನಕ್ಕೆ ಬಂದಿದ್ದು ಆದ್ದರಿಂದ ಮುಂದಿನ ದಿನಗಳಲ್ಲಿ 8 ಅಥವಾ 10 ಗಂಟೆ ವಿದ್ಯುತ್ ನೀಡುವ ಬಗ್ಗೆ ಸರ್ಕಾರ ಆಲೋಚಿಸುತ್ತಿದೆ ಎಂದು ಮುಖ್ಯಮಂತ್ರಿ ಎಸ್.ಎಂ. ಕೃಷ್ಣ ಇಂದಿಲ್ಲಿ ಹೇಳಿದರು.

ಅವರು ನಗರದ ದೊಮ್ಮಲೂರಿನ ಟಾಟಾ ಎನರ್ಜಿ ರಿಸರ್ಚ್ ಇನ್‌ಸ್ಟಿಟ್ಯೂಟ್‌ನ ನೂತನ ಕಟ್ಟಡವನ್ನು ಉದ್ಘಾಟಿಸಿ ಮಾತನಾಡುತ್ತಿದ್ದರು.

ಕಳೆದ 5 ವರ್ಷಗಳಲ್ಲಿ ಐಟಿ ಕ್ಷೇತ್ರ ಗಣನೀಯ ಸಾಧನೆ ಮಾಡಿದ್ದು ಈ- 'ಟೆರೆ' 'ಸಂಸ್ಥೆಯಿಂದ ವರಿಸರ ನೈರ್ಮಲ್ಯ ಕಾವಾಡಲು ಸಹಕಾರಿಯಾಗುತ್ತದೆ ಎಂದರಲ್ಲದೆ ಬ್ರಿಟನ್ ಪ್ರಧಾನಿ ಟೋನಿ ಬ್ಲೇರ್ ನಗರಕ್ಕೆ ಆಗಮಿಸುತ್ತಿರುವುದು ಹರ್ಷ ತಂದಿದೆ ಎಂದರಲ್ಲದೆ ಹೊರ ರಾಷ್ಟ್ರದ ಪ್ರಧಾನಿಗಳು ದೆಹಲಿಗೆ, ಬೇಟಿ ನೀಡದೆ ಬೆಂಗಳೂರಿಗೆ ಬರುತ್ತಿರುವುದು ಇವರು ಎರಡನೆಯವರು ಎಂದರು.

ಐಟಿ ಕಂಪನಿಗಳಿಗೂ ಸಮರ್ಪಕ

ವಿದ್ಯುತ್ ನೀಡುವ ಭರವಸೆ ನೀಡಿದೆ ಅವರು ಬೆಂಗಳೂರು ನಗರ ದಿನೇ ದಿನ ಬೆಳೆಯುತ್ತಿರುವ ನಗರವಾಗಿದ್ದು ಈ ನಗರಕ್ಕೆ ಸಮರ್ಪಕ ವ್ಯವಸ್ಥೆ ಮಾಡುವುದು ರಾಜ್ಯ ಸರ್ಕಾರ ಹಾಗೂ ಮಹಾನಗರ ಪಾಲಿಕೆಗೆ ಒಂದು ಸವಾಲಾಗಿದೆ ಎಂದು ನುಡಿದರು.

ವಿಶ್ವದ ಗಮನ ಬೆಂಗಳೂರಿನ ಕಡೆ ಹರಿಯುತ್ತಿದೆ ಇದಕ್ಕೆ 'ಗ್ಲೋಬಲ್ ಸ್ಪೇಲ್' ಕಾರಣ ಎಂದ ಮುಖ್ಯಮಂತ್ರಿಗಳು ಕೇವಲ 18 ತಿಂಗಳಲ್ಲಿ ಉತ್ತಮವಾಗಿ ಈ ಕಟ್ಟಡ ನಿರ್ಮಿಸಲಾಗಿದೆ ಎಂದರು.

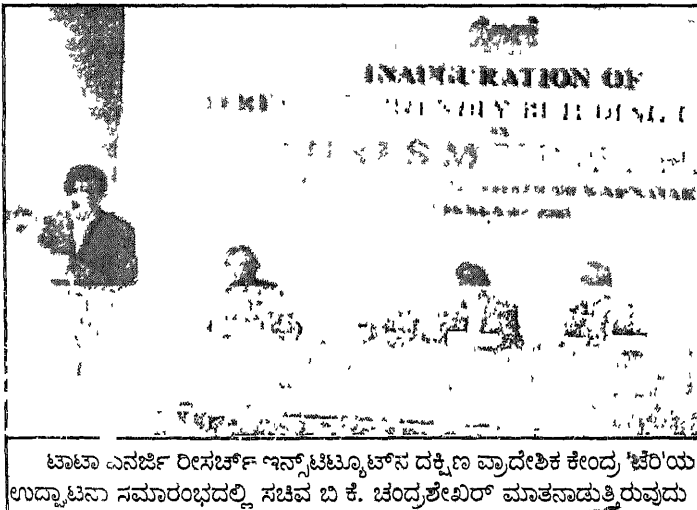
ಇದೇ ಸಂದರ್ಭದಲ್ಲಿ ಮುಖ್ಯ ಅತಿಥಿಯಾಗಿ ಆಗಮಿಸಿ ಮಾತನಾಡಿದ ಪ್ರೊ.ಬಿ.ಕೆ ಚಂದ್ರಶೇಖರ್ ಅವರು ಕೇಂದ್ರ ಸರ್ಕಾರದ ಯೋಜನೆಯಾದ ಭೂಮಿಯ ದಾಖಲೆಗಳನ್ನು ಬಡವರಿಗೆ ಕೈಗೆಟುಕುವಂತೆ 10 ರಿಂದ 15ರೂಪಾಯಿ ಶುಲ್ಕದಲ್ಲಿ ನೀಡುವ ಯೋಜನೆಯನ್ನು ಮಾರ್ಚ್ ಅಥವಾ ಏಪ್ರಿಲ್‌ನಲ್ಲಿ ಪ್ರಾರಂಭಿಸಲಾಗುವುದು ಎಂದರಲ್ಲದೆ ರಾಜ್ಯ ಸರ್ಕಾರ 'ಯುವ ಟಾಟಾ ಕಾಮ್' ಯೋಜನೆ ಅಡಿ 1000 ಶಾಲೆಗಳಿಗೆ ಕಂಪ್ಯೂಟರ್ ನೀಡುತ್ತಿದ್ದು ಇದು ಒಂದು ವರ್ಷದಲ್ಲಿ

ಮುಗಿಯುತ್ತದೆ ಹಾಗೂ ಮುಂದಿನ ದಿನಗಳಲ್ಲಿ ಕಂಪ್ಯೂಟರ್ ಮೂಲಕ ಮೌಲ್ಯಮಾಪನ ಮಾಡಲು ನಿರ್ಧರಿಸಲಾಗಿದೆ ಎಂದರು.

'ಬಯೋಟೆಕ್ ಪಾರ್ಕ್' ಬಗ್ಗೆ ವಾರದಲ್ಲಿ ಸೂಕ್ತ ನಿರ್ಧಾರ ತೆಗೆದುಕೊಳ್ಳಲಾಗುವುದು ಎಂದ ಅವರು ಗ್ರಾಮಾಂತರ ಪ್ರದೇಶಗಳಿಗೆ ಕಂಪ್ಯೂಟರ್ ಜ್ಞಾನ ನೀಡಲು ಸರ್ಕಾರ ನಿರ್ಧರಿಸಿದ್ದು ಈ ಬಗ್ಗೆ ಮುಂದಿನ ದಿನಗಳಲ್ಲಿ ಸೂಕ್ತ ಯೋಜನೆ ರೂಪಿಸಲಾಗುವುದು ಎಂದರು.

ರಾಜ್ಯ ಸರ್ಕಾರ ಕೇವಲ 18 ತಿಂಗಳಲ್ಲಿ ಮಹತ್ತರ ಸಾಧನೆ ಮಾಡಿದೆ ನಗರದ ಅಭಿವೃದ್ಧಿಗೆ ಸಾಕಷ್ಟು ಯೋಜನೆ ರೂಪಿಸಿದ್ದಲ್ಲದೆ ಸಂಚಾರ ವ್ಯವಸ್ಥೆಯಲ್ಲಿ ಸಾಕಷ್ಟು ಸುಧಾರಣೆ ಮಾಡಿ ಮಾಲಿನ್ಯ ತಡೆಯಲು ಮುಂದಾಗಿದೆ ಎಂದರಲ್ಲದೆ ನಗರಗಳಿಗೆ ಮಾತ್ರವಲ್ಲದೆ ಗ್ರಾಮಾಂತರ ಪ್ರದೇಶಗಳಿಗೂ ಉತ್ತಮ ಯೋಜನೆ ರೂಪಿಸಲಾಗಿದೆ ಎಂದು ಸಚಿವರು ಹೇಳಿದರು.

ಈ ಸಮಾರಂಭದಲ್ಲಿ ಆರ್.ಕೆ. ವಚೂರಿ, ಎ.ರಾಮಚಂದ್ರನ್, ಎಸ್. ಭಟ್ಟಚಾರ್ಯಜಿ ಮುಂತಾದವರು ಭಾಗವಹಿಸಿ ಮಾತನಾಡಿದರು.



ಟಾಟಾ ಎನರ್ಜಿ ರಿಸರ್ಚ್ ಇನ್‌ಸ್ಟಿಟ್ಯೂಟ್‌ನ ದಕ್ಷಿಣ ಪ್ರಾದೇಶಿಕ ಕೇಂದ್ರ 'ಟೆರೆ'ಯ ಉದ್ಘಾಟನಾ ಸಮಾರಂಭದಲ್ಲಿ ಸಚಿವ ಬಿ.ಕೆ. ಚಂದ್ರಶೇಖರ್ ಮಾತನಾಡುತ್ತಿರುವುದು

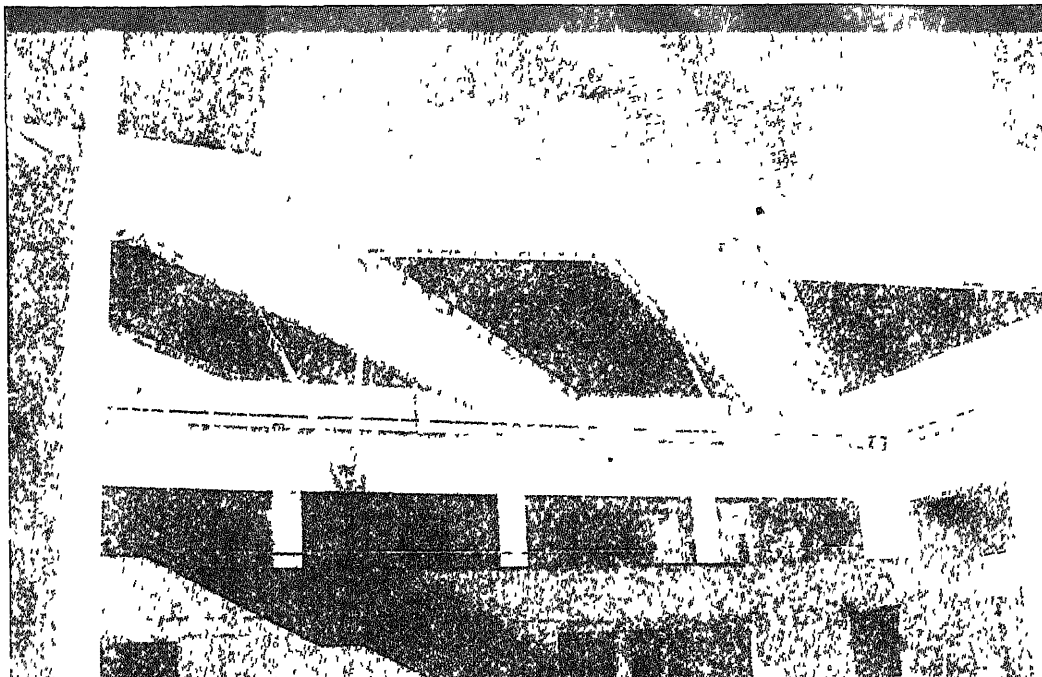


Photo by Sunil Kumar M

The solar photovoltaic system atop the energy-efficient building

Innovative eco-complex comes up in Bangalore

DH News Service

BANGALORE, Jan 2

An innovative eco-friendly and energy-efficient building complex designed to derive maximum benefits from nature's basic elements and minimise the demand on conventional energy has come up in the Garden City.

The Rs 2.95 crore building complex built in 25,000 sq ft area, which boasts of various features including a solar water heating system, a solar photovoltaic panel and a transplanted terrace garden, is said to be the first-of-its-kind in South India. It has overcome various site constraints including a foul smell emanating from the adjoining storm water drain.

As against the ordinary buildings of this size which require around 80 kw of power, this environmentally benign and aesthetically beautiful building needs just 10 kw of power.

Daylight streams right through to the heart of the building minimising the dependence of artificial light. The sun's energy is being tapped by a solar water heating system serving the kitchen

and other utilities. A five-kilowatt solar photovoltaic system meets a part of the power requirements. A provision has been made for rain-water harvesting.

Run-off from the roofs and the paved area is collected and stored in terrace tanks and collection sump.

"The complex is a judicious blend of technology and tradition symbolising the Institute's faith in research and commitment to sus-

The complex is a judicious blend of technology and tradition symbolising the Institute's faith in research and commitment to sustainable development, says Dr R K Pachauri, Director of TERI

tainable development," Tata Energy Research Institute Director Dr R K Pachauri said in a press conference here today.

The building opens towards the north and the absorptive double wall on the south provides insulation from the southern sun and heats up the air within.

The wall's sections allow the hot air to rise and pull in fresh air from the north. The sections are naturally ventilated with air flowing freely from the ground floor to the terrace.

We plan to make the building

truly sustainable in many more respects and are going in for a number of improvements and improvisations including a effective waste and water management system, a centralised uninterrupted power supply, and a cooler kitchen seeking to reduce the internal heat, Dr Pachauri said.

The complex should serve as an example for planners, builders, and architects to usher in a new revolution in the habitat sector

which consumes nearly 1/3rd of the total energy consumed, he said, adding that TERI would guide

those interested to build energy efficient buildings.

Referring to the cost, he said "the cost is same as that of any other conventional building. The extra cost is of the equipment such as solar water heating system and a solar photovoltaic system."

The complex located on the 4th Main, Domlur II Stage, housing the Southern Regional Office of the Tata Energy Research Institute will be inaugurated tomorrow by Chief Minister S M Krishna.

Teri, IOC ink deal to sell Oilzapper

Anil Urs

BANGALORE 2 JANUARY

THE TATA Energy Research Institute (Teri) has signed an MoU with the public sector oil major, Indian Oil Corporation, to globally market Oilzapper, the oil-eating microbes, which can slash the cost of oil sludge disposal by a whopping 80 per cent.

Talking to ET, Mr Rajendra K Pachauri, director general, Teri, said the method of application and technology know how to manufacture has also been transferred to IOC.

Oilzapper has utility value and eliminates oil sludge in oil refineries. The technology has been developed by Teri with active support of the central government's Department of Biotechnology (DBT). Companies in Middle East and Malaysia have expressed interest in buying the product and technology, revealed Mr Pachauri.

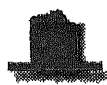
The oilzapper technology has come as a boon for oil sludge disposal which has emerged as a major concern for oil refineries. Huge areas are required for dumping the sludge. It gradually affects the ground water

and soil fertility, explains Mr Pachauri. The country at present has 15 grassroot oil refineries that generate huge quantities of oily sludge annually.

According to Mr Pachauri, refineries spend, on an average, Rs 3,000 per tonne to construct landfills for dumping oil wastes. Oilzapper will do the same job at around Rs 600 per tonne. Last year Teri granted a similar licence to Bharat Petroleum Corporation (BPCL) to produce oil-eating microbes.

Scientists at Teri have also developed mycorrhiza, a form of biofertilizer, which can increase plants' yield by 30-50 per cent. Mycorrhiza is applicable to various kinds of vegetables, flowers, fodder crops and trees here. It helps the plants absorb nutrients which roots cannot absorb in difficult soil conditions.

Explaining how it works, Mr Pachauri said Mycorrhizae is a fungi that attach themselves to plant roots and develop a symbiotic relationship with them. They help in the uptake of phosphorus, which are available in low concentration and therefore not available to plant roots directly.



Energy guru trashes CNG, turns off LPG

■ Delhi scenario is a total mess, if you adopt it here it could be a repeat: TERI boss

Express News Service

Bangalore Jan 2

A sudden shift to clean fuels such as Compressed Natural Gas (CNG) or Liquefied Petroleum Gas (LPG) will not solve the pollution problem in cities, better public transport is the only feasible way out, said Rajendra K Pachauri, director general of Tata Energy Research Centre, a New Delhi based non-governmental organisation. "The CNG scenario in Delhi is total mess. If you adopt it here it could be a repeat," Pachauri said. He also cautioned against a wholesale shift to LPG without putting in place adequate safety measures, as the high-pressure LPG

cylinders could be explosive in the case of a collision. "You cannot imagine a million bombs running around the City," he said.

Seeing the long-winding overnight queues at Delhi CNG stations, State Transport Minister Sagoor Ahmed had earlier said that Bangalore would not adopt CNG, for now at least. In Bangalore LPG is being introduced, but unstable cooking gas cylinders are currently strapped to car boots for want of a better design.

Pachauri, a double-PhD in Economics and Industrial Engineering is a vocal critic of the CNG drive in Delhi, brought about under directive from a Supreme Court appointed expert committee under veteran bureaucrat Bhurelal Pachauri is in the City for the inauguration of TERI's



R K Pachauri

new eco-friendly energy-efficient regional office building at Domlur on Thursday by Chief Minister S M Krishna. TERI has been working in Bangalore for 10 years.

Pachauri said that in Delhi the Bhurelal committee had the 'sacred duty' of studying the pollution problem and available options in detail before rushing in a forced shift of public vehicles into CNG. He estimated that the establishment of CNG-filling stations as well as conversion of three-wheelers, taxis and buses would involve a total cost of Rs 1,000 crore.

"You could have spent that money on an efficient public transport system," he remarked. Anyway, only 4 per cent of the vehicles could be converted as over 90 per cent of the vehicles were for private use in Delhi. On the contrary, if you introduce a comfortable public bus on road people would prefer it and you could take 24 cars off the road.

► Turn to Page 3

With The New Indian Express

3

FROM PAGE 1

Energy guru trashes ...

"In no country in the world is there a single fuel policy," Pachauri said. "We can think about using biogas for cooking and making LPG available for vehicles."

Reacting to Pachauri's comments, Central Pollution Control Board zonal officer D C Sharma - another PhD - said that a carefully-introduced multiple fuel choice would be a good policy. He said that LPG was found to be a clean, feasible fuel choice in Bangalore, and reminded that there is a High Court order that encourages three-wheelers to go LPG. "We are concerned with pollution, Government research centres should handle the design issues," he said.

Single fuel or your winter cough?

By Shubhajt Roy
Times News Network

NEW DELHI The Mashelkar committee's interim report on an automobile fuel policy has become the subject of much heated debate

The interim report has suggested that no single fuel be made mandatory and there should be the option of a choice between CNG and diesel in public transportation

This is what the automobile industry has been asking for But environmentalists and others concerned over pollution's growing impact on public health, say the committee has strayed from the goal of quickly bringing down pollution levels When the Supreme Court proposed CNG for the bus system in Delhi, it was concerned over the health of the ordinary citizen, they point out

Says Centre for Science and Environment director Sunita Naram "The committee never understood that public health was their main concern It was working for an en-

vironmental mandate and not a political one" Naram remembers arguing with the panel members, in October, about the "global best practices" in terms of the environment "One of them had asked, 'do you think we could achieve the global best standards?' Our immediate reaction was 'why don't we attain better than the global best?'" she recalled saying.

CSE's engine technology specialist, Chandra Bhushan said "Though none of the countries abroad including the United States specify a particular fuel or engine quality, many encourage certain fuels"

But Bhushan emphasised that government support is extremely important for fuel changes and improvement in fuel quality "Regarding CNG, the government should not increase the prices and the cost benefit will propel users to opt for it This is quite easy to do, as the oil pool deficit is due to diesel and petrol prices"

He said the price benefit prevents the CNG autorickshaw dri-

vers from switching over to petrol, although they have to wait in queues at CNG stations "The single fuel experience, in case of CNG, succeeds because it directly leads us to Euro IV in terms of suspended particulate matter levels," Naram said SPM causes cancer and is also said to affect babies in the mother's womb

This argument, however, has its critics IIT-Delhi's transportation expert Dinesh Mohan counters "There are doubts over CNG's so-called fabulously low pollution levels Even DTC's year-long experience with the fuel shows the engine oil in CNG buses can emit higher tail-pipe emissions when burnt" Welcoming the Mashelkar committee's report, Mohan said no western country has argued in favour of a single fuel "Pushing for a single fuel kills innovation and competition We had said this almost two years ago that performances should be prescribed, so that the researcher, manufacturers and vehicle operators can have a choice," Mohan said

What the panel recommends

- The government should decide only the vehicular emission standards and the corresponding fuel specifications without specifying vehicle technology and type of fuel.
- Bharat Stage II (equivalent to Euro II) emission norms in Hyderabad, Bangalore and Ahmedabad by the end of 2003 They are already in place at Delhi, Mumbai, Kolkata and Chennai.
- Extension of Bharat Stage II norms to the entire country from April 1, 2005
- Introduction of Euro III equivalent norms in Delhi, Mumbai, Kolkata, Chennai, Hyderabad, Bangalore and Ahmedabad from April 1, 2005
- Extension of Euro III equivalent norms to the country from 2010
- Fiscal regime applicable to auto fuels should be directed towards achieving the economic pricing of various fuels, instead of presently prevailing distorted pricing
- Set up upgraded emission testing facilities
- Preferential treatment to oil and auto industry with regards to customs duty on imported goods and equipment needed for technology upgradation, and excise duty on locally manufactured capital goods and equipment for modernisation.
- Soft loans for technology modernisation projects to oil and auto industry Incentives, such as tariff differentials, to enable the domestic industry to compete with imports
- Institutional mechanisms need to be set up to address on a continuous basis the issues related to emission norms, fuel quality, emission warranty, inspection certification programmes, approval of emission control devices and retrofits
- Well-defined fuel economy standards need to be put in place for new vehicles Suitable standards would be recommended in the final report, in March

How they went about the job

- Four sub-groups were formed which consisted of panel members and subject matter specialists, like the panel on air quality was headed by the CPCB chairman The four sub-panels dealt with air quality and vehicle emission norms, motor vehicle technologies, auto fuel quality, and economic and financial issues
- The committee invited representations from various stake holders, NGOs like Centre for Science and Environment and Tata Energy Research Institute Several industry associations, consumer interest groups, government agencies presented their views Says CSE director, Sunita Naram "The panel member heard us quite patiently and there were debates on several issues as well"

Brains behind report

- R A Mashelkar, director general, Council of Scientific and Industrial Research - has a chemical engineering degree.
- D V Singh, vice-chancellor of the University of Roorkee - an expert on automobile technology and former head of Central Road Research Institute
- R Natarajan, IIT (Chennai) director - has undertaken several research projects on fuel adulteration and is the only Indian on the editorial board of international journal Fuel
- D K Biswas, Central Pollution Control Board chairman - an expert on pollution gave the regulator's perspective in the panel
- K P Niyati, Confederation of Indian Industry's head of environment division - a chemical engineer and represented industry's view on the market
- Sudhir Singhal, Indian Institute of Petroleum (Dehradun) director - an expert on oils with experience in instrumentation
- O P Mathur, faculty member of National Institute of Public Finance and Policy - an expert on environmental economics, he provided the inputs of economics behind environmental initiatives
- P R Shukla, faculty member of IIM (Ahmedabad) - an energy expert who provided inputs on alternate energy resources
- N R Krishnan, former secretary to Union environment and forest ministry - gave a perspective on the environmental scenario

THE TRIBUNE

NEW DELHI

22 JAN 2002

Vehicle pollution in Capital up 8 %

TRIBUNE NEWS SERVICE

NEW DELHI, JANUARY 1

The vehicular pollution in Delhi has registered an increase in the last decade, which is supplemented by a phenomenal increase in petrol and diesel consumption, a study conducted by Tata Energy Research Institute (TERI), said

While the pollution has grown from 64 per cent to 72 per cent in the last decade in Delhi, petroleum and diesel consumption grew by over 400 per cent and 300 per cent respectively, in the last two decades, the study on air environment of the Capital said

The total vehicular pollution load in tonnes per day (tpd) in Delhi is as high as 1046.30 compared to as low as 226.25

in Chennai and 293.71 in Kolkata, the study said.

The second most polluted metropolis, Mumbai, has recorded only 659.30 tpd vehicular pollution load

Regarding the increase in the consumption of petrol and diesel, the study noted that it should be kept in mind that the fuels were also used to run diesel generator sets

Beside vehicles, the other two major sources of air pollution are fuel combustion in industrial activities and domestic stoves, it added

Among the large-scale industries, thermal power plants are the biggest defaulters, the study said. There are three coal-based thermal power plants in the Capital, located at Rajghat, Indraprastha and Badli

Vehicular pollution on the rise in Delhi'

PRESS TRUST OF INDIA
NEW DELHI, JANUARY 1

VEHICULAR pollution in Delhi has grown from 64 per cent to 72 per cent in the last decade while diesel consumption has grown by 300 per cent in the last two decades, reveals the latest study on the Capital's air quality.

The total vehicular pollution load in tonnes per day (TPD) in Delhi is as high as 1046.30 compared to 226.25 in Chennai and 293.71 in Kolkata, says the study conducted by Tata Energy Research Institute (TERI).

Even Mumbai, which stands second, has recorded a TPD of 659.30 only, the TERI study adds.

The total vehicular pollution load in tonnes per day in Delhi is as high as 1046.30 compared to 226.25 in Chennai and 293.71 in Kolkata, says the study conducted by Tata Energy Research Institute

the study said. At present, there are three coal-based thermal power plants at Rajghat, Indraprastha and Badarpur, the Tata Energy Research Institute study observes.

However, diesel consumption in the city is not confined to diesel vehicles alone since industrial processes as well as diesel generator sets also use the fuel, making the true estimation of diesel consumption for vehicles alone difficult, notes the study.

The other two major sources of the city's air pollution loads are fuel combustion in industrial activities and domestic stoves, it adds.

Among the large-scale industries, thermal power plants are the most prominent contributors to air pollution,

At present, there are three coal-based thermal power plants at Rajghat, Indraprastha and Badarpur, the Tata Energy Research Institute study observes.

ASSAM TRIBUNE

GAUHATI

2 JAN 2002

Jiribam-Imphal rail track development

Tata Energy Research Institute to take up Manipur rly work

From Our Correspondent
IMPHAL, Jan 1 — The survey work for laying the proposed 96 km long Jiribam-Imphal railway lines will be taken up by the Tata Energy Research Institute soon

Developmental work of the railway lines from Jiribam to Imphal is likely to be initiated at the earliest in order to remove the transport bottlenecks of Manipur

Earlier, the Union Railway Ministry plans to construct a railway line from Diphu (Assam) to Karong (Manipur) and then to Imphal which will be about 210 km and will pass through difficult parts of Nagaland and Karbi Anglong in Assam

General Manager (Construction), North East Frontier Railway, during his visit to Imphal, had assured that survey work for the proposed Jiribam-Imphal

railway line should commence from January 2002 and end by February 2003

It may be worth mentioning here that the Jiribam railway station in Jiribam subdivision is the only railway head in Manipur. Considering the advantages of railway line Jiribam to Imphal, the Central authority is taking up the project as a top priority

Union Railway Minister Nitish Kumar has given his reassurance to the Samata Party leader and former Chief Minister Radhabinod Kojam during the latter's trip to New Delhi recently

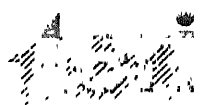
A separate reservation quota for Manipur to recruit reduced unemployed youths in the Railway protection Force (RPF) would also be taken up at the earliest, the

Railway Minister assured

The Union Minister was also impressed upon the necessity of integrating the Railway project with the Tipaimukh multipurpose project list it becomes impossible after the start of the Tipaimukh multipurpose project, if an integrated approach is not made from the beginning. The matter needs priority treatment as Tipaimukh project may be taken up anytime

The Railway Ministry is also trying to instal a railway recruitment centre in Manipur so that regular special recruitment rallies could be held from time to time. However, no prompt response has been taken up so far in this regard.

Owing to the financial position, the State authority has no capacity now to provide any employment



IN FOCUS

Building a scientific temper

The forthcoming Indo-British science festival is expected to be a big draw

Staff Reporter

After the success of the "Get Connected" series, here comes another science bonanza from Old Blighty, an Indo-British Science Festival 2002 that will bring 16 top UK scientists to India, including the Nobel laureate, Sir Paul Nurse.

"To be hosted in Delhi between January 6 and 18, the festival will later travel to Ahmedabad, Bangalore, Chandigarh, Chennai, Hyderabad, Kolkata, Lucknow, Mumbai, Pune and Thiruvananthapuram," says Dr Moina Nance, Counselor (Cultural Affairs), British Council Division.

Focussing on biomedical research, biotechnology, digital communications and environment, the delegation of UK scientists is headed by Britain's well-

known feminist, Baroness Helena Kennedy, an expert in the field of forensic science and criminal law and a celebrated broadcaster and TV journalist. She has contributed to scores of BBC TV series like 'Blind Justice', 'Heart of the Matter', 'Raw Deal', 'The Trail of Lady Chatterley's Lover', 'Time Gentlemen, Please' and 'Hypotheticals' to name a few. Her award-winning book, 'Eve was Framed' is a treatise on women and criminal justice system, as it exists in the UK. Incidentally, she also chairs the UK Human Genetic Commission.



autonomous agencies - ICMR, TERI, Apollo Hospital, Delhi, CMCB, Hyderabad, IISc, Bangalore, IIT, Bangalore, Cancer Research Institute, Mumbai, IITs of Powai and Chennai, Council for Science and Industrial Research, Delhi are also expected to participate.

The main draw of the festival, however, will be the science exhibition at the National Science Centre, Pragati Maidan of working models and panels brought from prominent UK research institutes on robotics, gadgetry for climate prediction, telemedicine, artificial intelligence, sportswear etc.

"Meanwhile, Baroness Kennedy is also launching a career website on 'woman & science' on January 19," informs Nance.

(For more information log on to www.sciencefestival2002.org)

The programme calendar

6th January Inauguration of the Indo UK Science Festival **Venue** The British Council

8th January 11 00 - 14 00 hrs A discussion on Human Genome Research **Venue** Indian Council of Medical Research (ICMR), Ansari Nagar

8th January - 11 00 - 14 30 hrs Lecture on Latest Trends in Biotechnology Research **Venue** Tata Energy Research Institute (TERI), Lodhi Estate

8th January 14 30 - 16 00 hrs Meet the Nobel Laureate - a session with school students **Venue** National Science Centre

8th January 15 30 hrs Inauguration of the Science Exhibition **Venue** National Science Centre

8th January 17 30 - 18 30 hrs Lecture on Biological cells and the nature of life **Venue** BCL

9th January 10 30 - 13 00 hrs Sir Paul Nurse - Visit to the Cancer Research Centre at the Apollo Hospital. Lecture on Controlling the cell cycle followed by felicitation **Venue** Apollo Hospital

9th January 16 30 - 18 30 hrs Lecture on Advanced Knowledge Technologies **Venue** BCL

11th January - 11 00 - 14 00 hrs Sir Crispin Tickell Lecture on Is economic growth compatible with sustainability, followed by a discussion moderated by Mr C Dasgupta, Distinguished Fellow, Tata Energy Research Institute (TERI) **Venue** IHC

11th January - 16 30 - 18 00 hrs Lecture on Electronic literature of the future **Venue** BCL

14th January 11 00 - 12 30 hrs Faraday Lecture - Time and Place in the Communication Age **Venue** National Science Centre

16th January 11 00 - 13 00 hrs Lectures on Social and Ethical issues in Biotechnology Research coordinated by Dr Lakshmi Devi, Principal, College of Applied Sciences **Venue** Gaiji College

18th January - 11 00 - 12 30 hrs Lecture on Biodiversity Conservation Initiatives for Students **Venue** BCL

The 'G-16' group that she's bringing to India includes, besides Sir Nurse, Sir George Radda, a celebrated cardiologist and the Chief Executive, Medical Research Council, UK, Sir Richard Sykes, Chairman, Glaxo Smithkline, knighted for his services to the Pharma sector in 1994, and Professor David King, Chief Scientific Adviser to the UK government, to name a few.

Expected to result in a "lasting partnership between institutions and individuals of the two countries," according to Nance, the festival features science seminars (for students and scientists alike), book exhibitions, films and 'science for fun' activities (see inset box for programme details).

Scientists from a host of Indian government and

Delhi sees 8% rise in pollution in a decade

New Delhi, Jan. 1: The vehicular pollution in Delhi has grown from 64 per cent to 72 per cent in the last decade and petroleum and diesel consumption grew by 400 per cent and 300 per cent respectively in the last two decades, the latest study on the city's air environment has said.

The total vehicular pollution load in tonnes per day in Delhi is as high as 1046.30 compared to as low as 226.25 in Chennai and 293.71 in Kolkata, the study conducted by Tata Energy Research Institute said.

Even Mumbai, which stands second, has recorded only 659.30 TPD vehicular pollution load, way below the national capital, the TERI study added.

However, diesel consumption in the city is not confined to diesel vehicles alone since industrial process as well as diesel generator sets also use diesel because of frequent power failures, making the true estimation of diesel consumption for vehicles alone difficult, the study said.

The other two major sources of the city's air pollution loads are fuel combustion in industrial activities and domestic stoves, it added. Among the large-scale industries, thermal power plants are the most prominent contributors to air pollution, the study said. At present, there are three

■ Turn to Page 11

8% rise in Delhi pollution

■ Continued from Page 9

coal-based thermal power plants — Rajghat, Indraprastha and Badarpur — in the city. Though the Supreme Court has directed a number of polluting units in Delhi to close down and some others to shift from non-conforming to conforming areas, the study said as far as the small scale sector is concerned, the air pollution emission scenario is not clear till date (PTI)

200 mgd shortfall of water in Delhi

Although water treatment capacity in Delhi has increased 14-fold to 600 million gallons per day (mgd) from 42 mgd in 1951, there is a shortfall of 200 mgd that includes 15 per cent losses, putting increased pressure on water resources, Tata Energy Research Institute has said

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■ Turn to Page 11

Dr. R K Pachauri

A Green Streak

Reduce the Natural Debt Burden

By R K PACHAURI

IN the run-up to successive budgets, an issue which is routinely overlooked is that of the role of sustainable development in economic growth. Neglecting the country's natural debt impacts unfavourably on society's ability to maintain equitable and healthy rates of growth. This despite the fact that our rivers have been polluted to an extent where they are now unable to sustain any form of aquatic life and their waters unfit for consumption by human beings and even animals.

The air in all our cities is polluted far beyond permissible limits, and the area under forest cover which the National Forest Policy 1988 stipulated should expand to one third of the total land area in the country is barely half of that.

Environmental quality is not a matter of sentiment. It is an economic imperative, particularly in a country where a majority of the population depends for its livelihood on services provided by natural resources and the environment. India is losing over 10 per cent of its GDP annually on account of environmental costs, according to a major study carried out by Tata Energy Research Institute (TERI) called GREEN India 2047. Between 11 to 26 per cent of the country's agricultural output is being lost on account of soil degradation.

While regulation and control have a place in correcting the damage that has taken place cumulatively to our natural resource wealth, the most effective and efficient solutions will have to come from the use of fiscal instruments. Today, in a large number of developed as well as developing countries there is a shift away from command and control methods to the use of suitably designed fiscal instruments that lead to environmentally desirable results in an economically efficient manner. This is where the annual budgets of both the Centre and states must build in a set of measures that not only arrest the degradation of natural resources, but also help enhance them over time.

The 1998-99 Annual Economic Survey included a chapter *Promoting Sustainable Development: Challenges for Economic Policy* which marked a refreshing departure from past practice, and gave those who are alarmed by the long-term unsustainable structure of growth in India the hope that finally the government was confronting grim reality. But this single token of enlightenment in development policy appears to have been abandoned for the exclusive coverage of the more conventional

topics that governments are more comfortable dealing with.

GNP is accepted as a country's annual measure of economic output and welfare, but it cannot be the sole indicator of economic health. Enlightened governments today commission or carry out assessments based on what has come to be known as natural resource accounting, which essentially includes changes in the natural resource endowment of a society. For instance, cutting down forests for market use of timber would add corresponding value to GNP, but nowhere would we account for the depletion of the natural resource wealth thus occurring. In essence, every time we produce goods or services by depleting natural resources we are borrowing the wealth of our children and accounting for it as riches created today.

A non-government think tank in the US called *Redefining Progress* carries out a regular assessment of distortions of this nature inherent in the measures of economic progress.

IN BRIEF

- Sustainable development plays a major role in economic growth
- Fiscal instruments must be used to protect natural wealth
- Environment-friendly consumer durables must be taxed less
- Alternative energy products must get more subsidies

used in that country and computes what it labels as the Genuine Progress Indicator (GPI). The measures it incorporates in computing the GPI include components such as cost of household pollution abatement, cost of air and water pollution, loss of wetlands and farmlands, loss of old growth forests and even the social cost of the widening gap between rich and poor. While the last of these costs would involve some value judgment, the others are based on standard estimation techniques. India's own GPI would be at least 10 per cent lower than the estimates of GNP computed conventionally, in fact, probably much worse.

What are the measures that the budget should include this year to arrest unsustainable production and consumption? First, prices can be influenced by taxation, to signal to the consumer and the producer the true cost of using the environment and natural resources. An efficient refrigerator, for instance, as also an efficient automobile, must carry lower taxes than one that is inefficient. This would require an

elaborate system of testing and labelling of these durables. A scheme to bring this about should be initiated this year. A little known fact is that in the US the efficiency gains in household devices over the last three decades have saved more energy than all the power produced in nuclear plants in that country.

A second area where action is overdue is in the case of perverse subsidies. With kerosene, for instance, the benefit of subsidies and price differential between kerosene and diesel goes largely to those involved in adulteration of petroleum products. Most rural consumers use kerosene for lighting purposes. A suitable subsidy on solar lanterns, which are now being manufactured commercially in the country would provide a pollution-free lighting technology for rural homes, deprive undesirable elements gains from adulteration and not cause the government any loss of revenue.

There is also a strong case for much higher allocations for programmes to expand the country's natural resource endowment. Investing in forests, sewage treatment or in air quality improvements results in rates of return generally much higher than from investments in physical capital for industrial production. However, it is essential that environmental improvement projects are implemented efficiently to produce targeted results. This can only happen if there is a much larger involvement of civil society in setting environmental goals and implementing and monitoring programmes with transparency.

The NGO sector has generally been far more effective in this regard than government departments, especially in implementing projects. The budget this year could lay down priorities for NGO involvement on a large-scale. Also, it is important to ensure that environmental improvement becomes part of the responsibility of each ministry, whether it is agriculture, transportation or housing. The ministry of environment and forests is not the only government agency responsible for creating a cleaner environment.

Despite the dismal record of past budgets largely ignoring the depletion of the environmental and natural resource wealth of this country, it would be heartening if in this year, which represents ten years after the Rio Summit, the annual budget makes a refreshing departure in addressing the serious challenge of sustainable development facing Indian society.

(The author is a director-general, TERI)

A Charged Climate

He is the high priest of environmentalism in India. As head of Tata Energy Research Institute, he is arguably one of India's foremost policy-makers in the environmental field. Today, in the running for chairmanship of the Intergovernmental Panel on Climate Change (IPCC), R K Pachauri finds himself facing allegations that he is being backed by a powerful oil lobby in the US. Speaking to Lalita Panicker, he counters these charges and speaks of the lack of environmental awareness in India

How confident are you of winning this closely contested election?

I have been nominated by the Indian government. I am already vice-president of the IPCC. The US has refused to support the present incumbent Robert Watson. I am quite confident. You have been dismissed as a weak candidate by your critics. They say that this is why the US is supporting you.

The US is backing me because it does not want Watson there. But I see no reason why the developed world should monopolise this post. I have been quite critical of the Bush administration's energy policies, so I am on the same side as Watson. But he first went around telling industry that I would be even worse than him for business. Now, he says I am a stooge of industry. Please note, the IPCC is a purely scientific body. It is not supposed to go into politics. Its reports are all scientific. Watson criticised the Bush administration. I would consider myself weak only if I don't get the support of the scientific community. I have never been cowed down by anyone.

What exactly has been Watson's criticism of Bush?

He has said that Bush has not done enough to ratify the Kyoto protocol. He has criticised the US administration's position on climate change. I would not do that. If you want to keep the credibility of the IPCC, you have to steer clear of this sort of controversy. I want to do policy-relevant research, not policy-prescriptive research.

Don't you think that bodies like the IPCC have been reinventing the wheel for years, telling us what we already know?

We don't know enough. If, for example, global warming causes the sea level to rise, how will it affect Bangladesh? We have to assess such problems, study their impact.

The other criticism against you is that you are an engineer and economist, unlike Watson, who is an atmospheric scientist. How valid is this?

When you are cooking a meal, anyone can prepare the masalas. But if the masala maker actually cooks the meal, you are in trouble. Atmospheric is only a part of environmental management. You need to focus on energy choices, the kind of clean technologies that we need to employ, public administration, economics, impact on agriculture, ocean sciences, forest management, health, disease-carrying species. The field has been dominated by atmospheric people and other areas of crucial importance have been ignored. I am far better qualified than an atmospheric scientist to head this body. By the way, all the criticism against me is coming from atmospheric scientists. **Do you think the US is playing a responsible role in these climate change meets and discussions?**

No, but the world is clear that countries have a common but differentiated responsibility in climate change. The US has to

is a realisation that poverty is everyone's problem. Lots of companies have become conscious of their responsibilities to society as a whole. Rio did this. But, no, I am not happy with the action.

Closer home, do you think the Supreme Court's order on compressed natural gas (CNG) is doing more harm than good?

Our views at TERI are different from those of the Supreme Court. We favour ultra low sulphur diesel (ULSD), the preferred option all over Europe. It is, in fact, cleaner than CNG.

Then why is CNG being spoken of as the only option here?

Well, some people got this bee in their bonnet. Over the last six to seven years, there have been so many new developments. After the Euro II engine and the advent of the particulate trap, ULSD has an edge over CNG.

Surely all this is known, then why the preference for CNG?

Well, many people acted on old information. They took a position and did not want to resile from it. All that mattered was ego. Some people, for example, said we were taking money from the Tatas. We have not got a penny, though the people who accuse us have cornered crores for themselves. With the push for CNG, certain bus and three-wheeler manufacturers are making a killing, churning much more than for diesel vehicles. We have been very incompetent in countering all this.

Are you saying that one committee, the Bhure Lal committee, decided on such a momentous change on its own?

Yes, the Supreme Court did not consult people like us on such a sophisticated decision. Only the opinion of one ramshackle committee was heeded as the fountainhead of wisdom. If the court decides that all citizens must only breathe air as pure as it is in the Himalayas, will the government pipe it down for them? Was a feasibility study done on CNG? What about safety standards?

What can be done now so common people don't suffer?

Let the CNG buses run, but experts must come up with other solutions for the remaining buses and public transport.

Will the metro help in Delhi? Is that the way to go?

Yes, but it has come 20 years too late. You know, these are not matters for the courts to decide. No one should prescribe one or the other particular path.



Devi Shankar

"If the court decides that all citizens must only breathe air as pure as it is in the Himalayas, will the government pipe it down for them? Was a feasibility study done on CNG?"

do more than India

What has been the reaction of the auto industry to developments since Rio?

The industry is a bit of a mixed bag. Really Bill Ford of Ford Motor, for example, has said that his company has to change, become more environment-friendly if it does not want to go the way of the tobacco industry. BP and Shell are trying to change, but companies like Exxon are totally resistant to change. Civil society has to bestir itself more. What the IPCC must do is to disseminate all its findings more actively. The IPCC gets inputs from more than 1,000 scientists all over the world. These are top-class research findings, people must know about these.

How much has changed owing to all the conferences after Rio? Has enough been done?

In terms of action, not much has happened. But there has been a clear change in perception. There

'I'm Not There To Change The World. I Can Only Change Its Level Of Knowledge'

Q&A

RK Pachauri

Rajendra K Pachauri's election to the chairmanship of the United Nations' Intergovernmental Panel on Climate Change (IPCC) on April 19 has made news for both the right and wrong reasons. There has been excitement over the fact that the panel — which assesses the impact of global warming — will be headed, for the first time ever, by a representative from a developing country. But his election has also generated controversy. With the US supporting his candidature and the Europeans voting for the then incumbent, has Mr Pachauri further weakened the IPCC, an organisation already divided on North-South lines? Questions are asked about his personal credibility and some also doubt the economist-engineer's qualification for the top job. In a talk with Parul Malhotra of The Financial Express, the Indian government's official nominee sets the record straight, outlines his agenda for the IPCC and his vision for tackling climate change. *Excerpts*

Congratulations on your election. What does the chairmanship of the IPCC mean to you personally?

It just means that I have to change everything that I'm doing because it's a major commitment. I'm looking forward to it with some degree of optimism but I also have some trepidation because it's a huge task and I have to ensure that it's performed up to everybody's expectations.

And for India and other developing countries?

I hope it means a little more than merely a sentimental satisfaction that we have a developing country person over there. As it happens, a number of developing countries are not very vocal when it comes to participating at conferences and meetings and so on. As a result, some of their concerns and sensitivities remain unrepresented. With me in that position I would at least be able to redress that particular problem. But I also believe that now that I'm in this position, I shouldn't have any bias towards one group of countries or the other. Therefore, I'll remain as balanced as I can and ensure that as chairman of the IPCC I'm answerable to everyone that's part of the membership of the organisation.

Also, the IPCC is not supposed to do policy prescriptive research, only policy relevant research. Or rather, carry out assessments based on research which exists on various aspects of climate change. I'll be conscious of this expectation, which, perhaps in the past, hasn't been given the importance it deserves. I believe if one goes into the economic aspects of climate change, then you're making your assessment much more policy relevant, of greater interest to the policy-maker.

In concrete terms, how will developing country sensibilities be reflected? Perhaps in the 4th Assessment Report to be released under your chairmanship?

Absolutely I hope so. That's one of the things that will automatically get addressed through much greater focus on regional and local variables, particularly in terms of impacts of climate change. Unless you're able to articulate this in a manner that's relevant to people in a particular region, you're not bringing home the import of your findings to a level where people feel that they should be doing something about it. To some extent, that will get reflected in this greater emphasis on regional and local issues. But if one has to go beyond that, to give

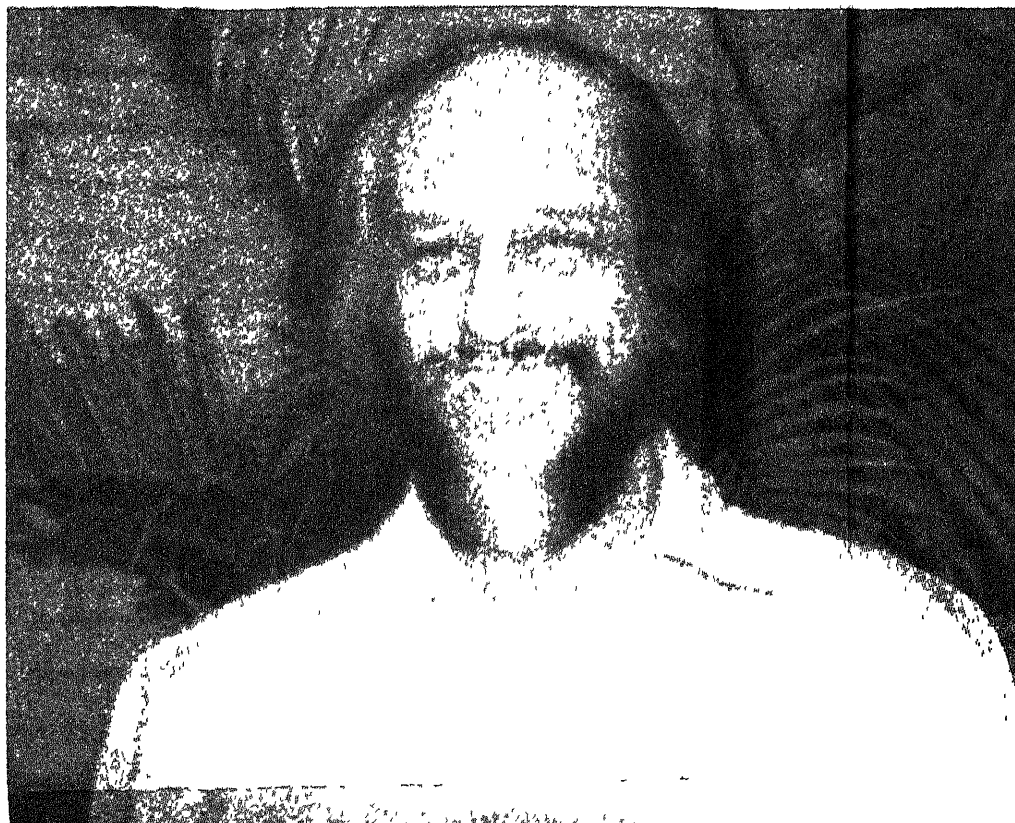
The very fact that there were divisions led to my being elected. The developing countries were all with me. As for the developed world, the US, Mexico and Japan are with me, the Canadians are on the fence but I have excellent supporters in Canada.

you an example, if a poor island state has to erect a dyke to keep the sea out and it doesn't have the means to do it, then you have to be sensitive to that reality. Issues of that nature will have to be reflected, and I hope to articulate them.

Could you have made it without American backing?

Absolutely. The US is just one country and I appreciate their voting for me. But as you know, in the current context, the bulk of my support came from the developing countries. The US asking any developing country to vote for someone who's already from a developing country isn't really a requirement of any kind. I don't even know if it would have helped in any way.

But you secured votes of the LatAm (Latin American) countries. An American effort aimed at secur-



ing them for you is highly probable. No, not all of them did (vote for me). In fact, some of them came

against me because of political reasons. It wasn't a vote against me. After the elections, several of them told me even though they hadn't voted for me, they would support me. So, I see no reason at all to worry about a divide. But I shall make every effort to remove even the semblance of a divide. And perhaps there was an existing divide whereby developing countries didn't feel totally a part of the process so, to that extent, we've corrected an imbalance.

Given your predecessor's (Robert Watson) open criticism of US policy on climate change, the US vote must have been more against him than in your favour?

(Laughs) I would like to believe that it's in my favour but you must be right. It must probably be a vote against him. Obviously they didn't want to support him because of his statements. As a result, I'm much wiser because I'm certainly not going to make any controversial statements, not against the US, not against any other national government.

But that's exactly what your critics worry about. Despite being the single largest emitter of greenhouse gases, the US hasn't ratified the Kyoto Protocol (which mandates specific levels of emission cuts), the only political instrument to have emerged from the IPCC. Why this

reluctance on the part of the chief of a panel formed to assess aspects of man-created climate change?

There has to be a very clear separation between IPCC which is a knowledge-creating body and the Framework Convention on Climate Change which is responsible for the negotiations. The IPCC provides a scientific basis for action to be taken by the parties responsible for actions to be taken. To maintain its credibility, the IPCC must maintain a distance from everything related to the FCCC. I'm only correcting an aberration which has occurred in the past. I'm not shying away from my responsibility to see we maintain our impartiality, objectivity and don't get embroiled in issues related to the FCCC, tempting as it might be. I'm not here to play to the gallery.

So, will reports coming out of the IPCC continue to sound the alarm on global warming?

The IPCC has done that very well in the past and will continue to do so. It'll continue the tradition and maintain standards of scientific integrity and credibility. But it's not enough to produce good reports of the right standard. If we want to be effective, we have to spend more time, effort and resources on disseminating our information. The outreach part is going to be vitally important now and I'll see that that will happen. In fact, we've already

made a small beginning, putting aside resources for outreach in the new budget. This wasn't the case earlier.

You talk about the significance of outreach. But is that likely to be a successful approach? How can merely providing information on climate change sensitise a nation that rejects an emissions control treaty because it's not in its economic interest?

In a democracy, ultimately what will happen will be decided by civil society. No administration can survive if the people want something different from what it (the government) does. That's why the focus on sending the message out to civil society, whether research organisations, academic institutions, or non-governmental organisations. It's up to them then to do what they want. The IPCC is not in the business of changing governments and I'm not there to change the world. I can only change the level of knowledge that the world has.

Will not your lack of grounding in basic science impede your functioning?

I look at any single individual can't be an expert at everything. Climate change has not only to do with

everybody. I have very good friends in the Arab world, in Africa, Russia and central Asia. As for the US, I don't know anybody in the current administration, I've had no contact with them at anything other than at a fairly junior level. It's actually Al Gore who's a personal friend of mine.

and this personal friend of yours has called you the "let's drag our feet" candidate...

(Laughs) Well, yeah, from complementing my vision, commitment and dedication to this! But that's politics. The man is finding it convenient to say all this for certain reasons. But I'm not going to lose my sleep over this.

What's your vision for the Kyoto Protocol? How vital is it for tackling climate change? Has it lost its bite with the US not being on board? Will you attempt to facilitate an amendment to it, to both developed and developing country satisfaction?

It's important but not the last word. We need global action (on global warming). If any part of the globe is left out of it, it's obviously not going to be as effective. And Kyoto's already been diluted. I don't know what further dilution is possible.

It's important but not the last word. We need global action (on global warming). If any part of the globe is left out of it, it's obviously not going to be as effective. And Kyoto's already been diluted. I don't know what further dilution is possible.

atmospheric science but also with impacts on agriculture, on water, on sea level rise etc. Mitigation options require knowledge of technology and economics which are my strengths, strengths that my predecessors didn't have. We also have two excellent co-chairs who will spearhead the working group dealing with atmospheric science. So, why should I feel handicapped?

There's talk of you being elected because of your close ties to the US oil and energy industry and, therefore, to the present administration. Others wonder why you garnered US support since you have, in the past, called for a boycott of US goods and such like. That means both camps doubt your credibility. Isn't this bizarre? Why is it so?

What's bizarre is their thinking. What do they mean when they say I'm close to the US? I'm close to

will turn out to be something similar. It may not have the Kyoto-type of fixed targets, it might allow much greater latitude or choice in terms of what needs to be done. If sinks are included, then you may be allowed to grow trees rather than cut down emissions. And certainly, as you say, if India wants to use more of solar and wind energy, that would be a cheaper option for us than to go in for some other form of energy use. This, of course, will not be the case for countries with cloud cover all the year round. So, flexibility of this nature will probably be a much greater part of solutions that will emerge.

If Kyoto's not all important, what else is needed to combat global warming?

If you look at the trajectory of emissions in the future, we have to take some urgent steps to reduce them. Kyoto is a blip on the horizon. What is needed is a total change in the way we do business. Over a period of time, our transport sector, the way we use energy, the type of energy we use — all this has to change. We have to allow technology to take up space which currently is totally vacant. This means some efforts on the part of governments to promote certain types of technologies but that's really a question of what measures are adopted. The end result should be a major shift in technology which brings about a change in fuel use and an improvement in the efficiency of fuel use.

How do you view the role of the free market vis-a-vis technology?

We need a combination of both. If market instruments can be used in a fair and equitable manner and result in efficiency gains, why not? But we have to weigh every measure carefully and see whether it's effective, efficient and equitable. At the end of the day, the countries of the world have to decide politically what is acceptable, and up to what extent, and what is not acceptable.

So, will you now be exercising greater pressure on your own government to take climate change seriously?

I won't exercise pressure but I'll certainly bring this to their doorstep. India has to be concerned about climate change. We have to start understanding the impacts of climate change because we'll probably have to take steps to adapt to changes that are going to take place. Let's at least start assessing them, carry out research, and debate on some of these things. We are far from satisfactory in our response in that regard.

Is there a case for giving nations flexibility in terms of mitigation options? Some can go down a different path than others, but toward the same goal of a cleaner environment.

My hunch is that the next regime

'Partnership key to tackle climate change challenge'

— Dr R. K. Pachauri, Chairman, IPCC

S Gopikrishna Warner

THE negotiations on the Climate Change Convention and the Kyoto Protocol are fought fiercely by various governments due to their impact on the national energy economics. The assessment reports of the Intergovernmental Panel on Climate Change (IPCC) have been providing the scientific template for all climate change discussions since 1988. Dr Rajendra K. Pachauri, Director-General of the Tata Energy Research Institute, became the first Indian to be elected Chairman of IPCC, during the recent elections at the international scientific and technical body. In an e-mail interview to *Business Line*, he spelt out his priorities and concerns.

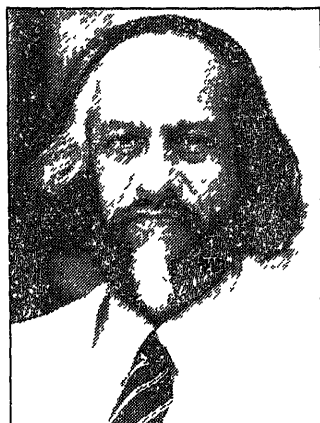
Excerpts from the interview:

Even before becoming the Chairperson of IPCC, you have been associated with it as Vice-Chair. The IPCC had been coming out with its assessments on the adverse impacts of global warming, and what policymakers should do to mitigate it. What do you think will be major impact of global warming on India? What should be the major actions of policy makers and citizens to mitigate these impacts?

The impact of climate change on India can be serious. For instance, the sea level rise will not only affect several coastal settlements and economic activities, but also damage ecosystems in these locations. Further, sea level rise will lead to higher salinity further inland.

There are also likely to be adverse impacts on agriculture, forests and biodiversity. In other areas there are indications of very serious impacts, such as the receding of our glaciers in the Himalayan range. This trend can have very serious effects on water supply in the northern half of this sub-continent. Against the likelihood of these impacts we would need to take certain adaptation measures.

For instance, biotechnology in agricultural research will have to focus on creating more



We need to manage our water resources more efficiently so that scarcity does not lead to crises. Of course, all these actions will be taken only if climate change is understood and accepted by our policymakers.

As Chairman of the IPCC, what will be your priorities for the short-term and long-term (for your six-year tenure)?

My major priorities as Chairman of the IPCC would be to uphold and enhance the credibility and integrity of the organisation.

The work of the IPCC has to be objective and of a very high level in terms of academic and professional strengths. I would like to see that the best scientists and experts from all over the world are utilised for the work of the IPCC. In terms of priorities:

I would like to focus on the economic and social aspects of climate change. We would also need to be more focussed on regional and local issues to the extent possible. Finally, I would like to launch a major outreach programme, so that the work of the IPCC reaches a large cross section of society to ensure its fullest benefits.

This is the first time that an Indian has been chosen to head this technical body that holds a mirror to policymakers on issues related to global warming. As a scientific institution, IPCC has a certain continuity that is international in nature. However, as a scientist with decades of working experience in India, what are the

perspectives that you can bring to this body?

Now that I am Chairman of the IPCC, I am in several respects a stateless person and would have to view the work of the organisation within a global context. But I would try to be sensitive to the interests of those countries which have not had enough of a voice in the past, and which are likely to be the worst victims of climate change. This includes the developing small island states, the least developed countries and many others. I believe a greater regional and location-specific focus would be of interest to every society on earth. With such an approach, I think it should be possible to get the involvement and interest of every country in the world on the subject of climate change.

Though the role of IPCC is policy advisory but not policy prescriptive, it is said that political pulls do not affect it. However, in reality, it certainly cannot be above these pressures, since its recommendations deal with energy, and the access to and use of energy determines the strengths of national economies. How do you propose to handle these pressures?

I fully realise that in an intergovernmental body of the type the IPCC is, political pressures will certainly be present. However, the Panel has evolved an excellent culture, based on consensus and objective debate. I would try my very best to build on this approach without compromising on the overall objectives of the IPCC. I fully understand that the work of the IPCC involves very delicate and difficult exercise of diplomatic skills. However, I feel confident that I would be able to measure up to these requirements.

'Partnership between stakeholders' is the theme that is being focussed strongly in the current environmental discussions — the Prepcoms and the WSSD. Do you think that partnerships can help tackle emission of greenhouse gases? What kind of partnerships do you visualise? And, more pertinently, what are

ship process?

Partnership is absolutely essential for tackling the challenge of climate change, simply because this is a problem that the entire global community has to participate in solving. I think the spirit of partnership is clearly included in the Framework Convention on Climate Change, which emphasises "common but differentiated responsibility" for all countries on earth. Partnership, however, would have to be based on sensitive acceptance of the constraints and opportunities that each society faces in tackling the challenge. I visualise partnerships based on the role of technology and finance, wherein the countries of north and south, east and west will have to work together. There is, of course, a limited role for the flexibility mechanisms included in the Kyoto Protocol. The limitations of the partnership process would be defined by national interest clashing with international objectives. But much would depend on the kind of atmosphere of co-operation and compromise we are able to create in the international arena.

Much of the controversies regarding the manner in which global warming can be tackled comes because there are still a lot of scientific uncertainties over the linkages between GHG emissions and the impact on the climate. Do you think these uncertainties will reduce over the years?

There will always be some uncertainty between the causes of climate change and the nature and magnitude of their impacts. However, these uncertainties have been reduced considerably in recent years, a trend which is likely to continue.

Essentially, scientific knowledge as it evolves will have a major effect in reducing uncertainties in the area of climate change.

This is something that the IPCC will have to attempt consciously, but of course the work of the IPCC would be dependent on the quality of research and existing knowledge that is

It's Time To Seed The Earth

WITH rapid globalisation of the economy of most countries and an enlarging role for the private sector, one emerging concern which is receiving widespread attention pertains to the importance of corporate social responsibility. The activities of business and industry have major impacts on society, and while much can be achieved through effective legislation and regulation to ensure that society's interests are not compromised in the pursuit of profits for the shareholders of private enterprise, there is also a growing need for a realisation on the part of corporate leadership itself that society's interests have to be integrated with business objectives.

An oft-repeated cliché is that business cannot succeed in a society which fails. This, of course, represents the vista of an extreme situation, which in some sense conveys only the negative aspects of a corporation not serving its longer term interest. A more positive view would rest on the reality that doing good for society in a visible and clearly demonstrable manner would certainly enhance the success, even in a business sense, of private enterprise as well.

In the past several decades, business decisions, which looked purely at generating higher profits for the enterprise

have succeeded in a narrow sense by imposing heavy externalities and costs on society. This has happened not only at the local level but today there is a substantial danger of this occurring at the global level as well.

The threat of climate change, for instance, has been created by increased concentration of greenhouse gases (GHGs) in the earth's atmosphere, including carbon dioxide and methane. The bulk of this problem has arisen because of the burning of fossil

fuels on an increasing scale since the start of the industrial revolution over a century and a half ago. If fossil fuels had been priced in a manner that reflected the global social cost of increased consumption, then perhaps the problem would not have arisen in the first place, because cleaner fuels would have been developed as well as technologies employed by which the concentration of carbon dioxide, and other GHGs, would not have reached harmful proportions.

To adjust prices now, when equipment, appliances, habits and business practices have been acquired on the basis of low fossil fuel prices, becomes a difficult undertaking, with substantial resistance from most sections of society. But corporations need to show courage and vision in taking actions that would mitigate emissions of GHGs, as indeed some companies are doing.

In today's world, any damage to society and its overall interests at the local or even at the global level will not remain unnoticed and unreported. Today's information systems will ensure that a problem

caused by any corporate entity in any part of the world will become news in every other part of the world almost instantly. Hence, it is in the interest of corporate organisations themselves to assess the

impacts of their actions on society, both positive and negative. With growing consciousness of the role of a modern corporation and its effects on society at large, a good image established through good actions by any corporate entity would, in some sense, represent an effective means of advertising its virtue in the eyes of society. A perception of a lack of such virtue would represent just the reverse. The success and staying power of a company would, therefore, come only from the ability of a corporate organisation



GUEST COLUMN

R K Pachauri
Director general, TERI

tion to ensure that it attains a favourable image by pursuing acts that have a favourable impact on society.

The concept of corporate social responsibility needs to be carried beyond the current operations of an enterprise. Despite the huge success that the world has achieved by increasing its income from \$6 trillion in 1950 to \$43 trillion in 2000, millions still live in abject poverty. For instance, the world had 854 million illiterate adults in 2000 and 1.2 billion people living on less than one dollar a day and 2.8 billion living on less than two dollars a day.

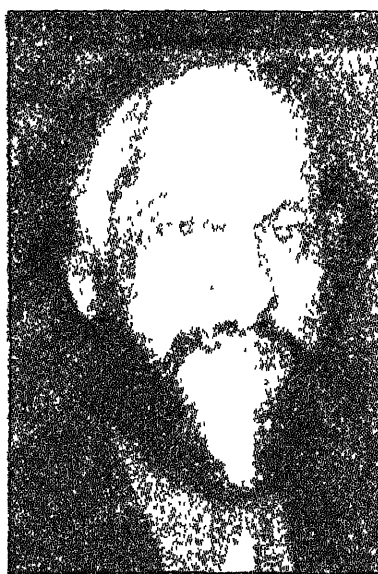
This is a section of the world population that has escaped the attention of the corporate sector. Technologies, products and services that have been developed throughout the period of industrialisation have essentially focussed on the upper segments of society, mainly because these provide immediate returns and provide business opportunities that could be tapped without unconventional efforts. Yet, the poor of the world represent a huge, untapped business opportunity. If services such as micro-credit and insurance, products such as renewable

energy devices, cellular phones, and seeds that produce high agricultural yields could be made available to this section of humanity, not only would business expand on a

Of course, moving into these potential markets would require the establishment of infrastructure, which does not exist today. There is, therefore, a need to plant the seeds of future business opportunities today, which would provide widespread results tomorrow. This approach, termed as seeding the earth, represents a new way of identifying business opportunities that cannot be postponed much longer in a world where the barriers of the past are being demolished rapidly. Success in the removal of poverty has huge benefits for rich and poor alike. The spread or persistence of poverty on the other hand is not only a curse for those who suffer from it but also the rich who cannot insulate themselves from this scourge.

Interestingly, technology today displays some very favourable features that make its use widely acceptable. Whether it is modern information technology or distributed and decentralised forms of energy production, it is now possible for even those with low levels of literacy to use and operate these devices with minimal training and understanding of their complexities. The rapid evolution of these technologies has, therefore, opened up areas of business that did not exist earlier. Corporate social responsibility involving the spread of business to harness these opportunities is, therefore, not a form of charity but in actual fact a means by which the corporate sector is seeding the earth for much bigger returns in due course. But much of this will only happen if existing mindsets are changed and corporate managers look at the present as well as the future not merely in terms of profits being maximised in the next quarter but within a longer time horizon. ♦

*The poor
of the world
represent a
huge, untapped
business
opportunity*



Dr Rajendra K Pachauri — head of TERI (Tata Energy Research Institute), is the first non-white to have been elected as the Chairman of IPCC (Intergovernmental Panel on Climate Change) established by the United Nations Environment Programme. He has been awarded the Padma Bhushan

It has taken 20 years to raise TERI to the level it is today. What difficulties did you face?

It was very tough to generate all our resources. There was no regular income and energy conservation was a new concept.

What did you seek to achieve?

To create an institution with a difference — something that is one of a kind in our society. I always wanted to expand it internationally and nationally. Sadly, we have a huge vacuum in terms of intellectual endeavour. TERI was the best option to tackle problems at the grassroot level.

Still certain areas are being neglected. Problems are varied and intensified. For instance, most villages are not going to get electricity for the next 30 years, no matter how much we talk about urbanisation or globalisation.

What needs to be done?

It is important to work with local societies and create an institutional structure. By making optimum utilisation of resources, roping in oil companies plus government subsidies, we need to improve upon local capacity.

What has TERI done to

achieve these targets?

We have worked in a number of villages, mainly in the Himalayas. Earlier, the locals would cut wood to heat water. We introduced a new heating system — storing water in a large canister with a permanent water heater. We would give villagers a large bucket of water in return for a certain sum.

From an economist to an environmentalist — that sure seems a huge leap? Why the change?

I have always been an environment lover considering I was born and brought up in Nainital. Unless we care for the environment, how can we live in it?

There is a link between our economy and the environment. Global warming is one problem that has been aggravated by the way we live. It is the result of a totally distorted economic system. Our first culprit is the traffic regulation system.

We need to reverse what we have done. We have taken our environment too much for granted. Chopping trees, excessive pollution, a drop in the atmospheric levels — are all responsible for the change in the ozone layer.

What should be done to change this scenario?

The first important step being done successfully by many schools is to make children aware of environmental issues. It is amazing to see the shift in priorities.

As chairman, IPCC, what are your goals?

The aim is to have local action specific assessment, mobility in action, instant services (planting trees, clearing litter), to bring these reports before the public (mass scale circulation of decided guidelines).

Do you see small as well as long term targets being met?

The main purpose is to involve people in initiating action. If nothing else, I can promise to create awareness through technological advancement. With that, everything will fall in place.

*Interviewed by
Bhavini Misra*

TERI Staff

Undermining independent regulation

THE government's ambivalence towards independent regulation comes out yet again in the Electricity Bill 2001 now before the Select Committee in the Lok Sabha. The Bill provides a framework for independent regulation, but introduces concepts that could undermine independent regulation.

Section 121 places the regulatory commission under the superintendence and control of the chairperson of the Appellate Tribunal. Regulators should be accountable. But accountability has to be ensured by requirements of transparency and provisions for appeals against regulatory decisions, and not by bringing the commissions under the supervision of an individual, not even if that individual heads the Appellate Tribunal. Given the lack of guidelines on the manner in which supervision would be exercised, this section could result in an erosion of regulatory autonomy.

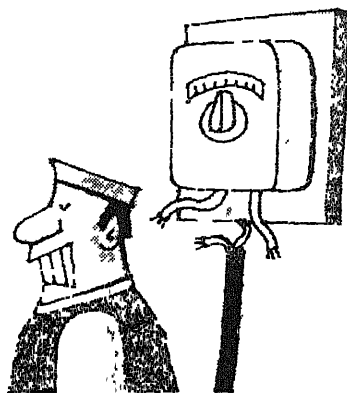
The Bill further dilutes regulatory autonomy by reducing the normal tenure of regulators from five years (the standard in India and elsewhere) to three. It also makes regulators eligible for reappointment. Presumably, such reappointment would be possible only with the approval of the Selection Committee. But, unfortunately, the Selection Committee is not independent. It is composed of members who are likely to be influenced by the government. A short tenure, promise of re-appointment and a captive Selection Committee constitute the perfect recipe for influencing the regulator.

Besides the short tenure of three years, there are provisions that prohibit members from accepting government or commercial employment for two years after demitting office, they would severely discourage industry professionals from becoming regulators. Thus, the Bill, instead of seeking to attract the best talent, does just the opposite.

The regulator's role in promoting competition is very limited under the existing reg-

GUEST COLUMN

S SUNDAR & S K SARKAR



ulatory legislation in India. The promotion of competition is only an advisory function of the regulator, both under the TRAI Act, 2001 and the ERC Act 1998. And neither Act spells out the regulator's role in maintaining competition, although the regulator has some opportunity to do so through provisions relating to inter-connectivity, etc. Now for the first time, however, section 60 of the Bill specifically empowers the regulator to maintain competition by issuing directions to a licensee who tends to abuse his dominant position or enters into arrangements which are anti-competitive. These powers are very similar to the powers that the Competition Commission of India (CCI) would enjoy under the proposed Competition Bill.

There could be turf wars between Electricity Regulators and the CCIs as both would have concurrent powers to maintain competition. In the UK, where a similar situation exists, the question of jurisdiction is decided

on the basis of who is 'best' or 'better' placed to deal with the issue. A similar arrangement needs to be worked out in India to avoid jurisdictional conflicts.

In terms of section 95 of the Bill, all the proceedings before a commission are to be deemed to be judicial proceedings. This would require the commission to employ the quasi-judicial approach although regulators the world over employ different processes to arrive at regulatory decisions. Even in dispute resolution they use process-like negotiation and mediation. TRAI also employs the process of consultation to arrive at decisions, experience has shown that it leads to a more comprehensive discussion of issues involved and helps in gaining the consent of stakeholders. That is why the Bill should have left it to the commission to employ a process best suited to deal with the issue on hand. (The consultative process could be adopted for tariff setting or laying down quality standards, reserving the quasi-judicial process for imposing penalties.)

One issue that has been confounding the advocates of independent regulation is the relationship between the regulator, the minister and Parliament. The minister is accountable to Parliament, or the legislature, for all that happens in the electricity sector, but the regulator is neither accountable to the minister nor to Parliament.

We now have some seven years of regulatory experience. There have been four regulatory legislations at the Centre and in the states. Thus those who drafted the Bill had the opportunity to learn from history, avoid the mistakes made earlier and adopt the good practices contained in earlier legislation. That opportunity has been lost and some of provisions in the Bill are retrograde. One can only hope that the situation can be retrieved between a minister committed to reform and a sagacious Select Committee.

(The authors are with the TERI, New Delhi. These are their personal views.)

Towards sustainable food security

A case for stockpiling purchasing power, which is a good substitute for stocking grain

R. Kacker
T. V. Somanathan

FOOD subsidies in India, under the Public Distribution System (PDS) have come under increasing scrutiny in the context of the country's precarious fiscal situation, on the one hand, and the absurdly high stocks of foodgrains, on the other. Governments have frequently lost (and occasionally, as N. T. Rama Rao showed, won) elections on the basis of their action or inaction, actual or alleged, in relation to food.

Rice in Tamil Nadu in 1967 and in Andhra Pradesh in 1983, sugar all over India in 1979, and onions in the North in 1998 have all been credited, rightly or wrongly, with changing political fortunes. The politics of food is, thus, as risky as the economics are difficult. This article takes a close look at the ingredients of today's acute food subsidy problem and tries to suggest a reform recipe that is both economically wholesome and politically digestible.

The problem

Food subsidy at the Central level has sharply increased in recent years — almost doubling from Rs 7,500 crore in 1997-98 to Rs 13,760 crore in 2001-02. It is reflected in the Central Budget documents by a single entry. This accounting method gives the impression that the entire subsidy is on account of the benefit of lower prices to PDS consumers, an impression strengthened by use of the term 'consumer subsidy' for the entire amount in such official documents as the *Economic Survey*.

In actual fact, the subsidy includes two elements that cannot be attributed to PDS consumers. First, the cost of holding buffer stocks. Buffer stocks are a strategic requirement, and they moderate prices in the open market. The benefits of holding these stocks flow to all consumers and not just the PDS consumers. Second, the Government is bound to accept, through its agencies, all the grain offered at the minimum support price (MSP) that it fixes for every cropping season.

For the past decade, stocks have been held far in excess of what is notified as the optimal buffer stock level. The cost of holding this surplus stock (and the loss incurred in eventually selling it to non-PDS consumers) is clearly not attributable to the consumers, as the stocks were purchased in excess of the consumers' requirements. This amount has to be attributed largely to the farmers for whose benefit the excess was purchased.

One could also attribute part of the cost of surplus stock to the State governments, which get revenues from various levies, or even to operational inefficiencies. To the extent the grain is exported, consumers outside India are beneficiaries of the subsidy too. The point to be emphasised is that a large part of the 'food subsidy' arises due to excess procurement and cannot be attributed to the PDS.

Since food subsidy is generally (but, as we have seen, erroneously) viewed as a consumer subsidy, it can (it is logically assumed) be reduced by increasing the price paid by the consumer, or reducing the number of PDS consumers eligible for the subsidy. From time to time, therefore, issue prices have been raised and restrictions introduced in the form of targeting, distinguishing between above and below poverty line (APL and BPL) consumers. The problem with the stock remedy (price increase) is that it leads to increased stock! This is because higher prices reduce consumer off-take.

When the issue prices were raised in 1994-95, the off-take from the PDS decreased and this coincided with good crops. Consequently, food stocks rose, from 6.6 million tonnes in January 1994 to 14.8 million tonnes in January 1995. The policy response to this was to freeze issue prices. This helped reduce stocks. But keeping selling prices constant while purchase prices (MSP) were rising meant that the per unit consumer subsidy zoomed upwards.

Between 1995 and 1998 the subsidy on wheat rose from Rs 1.43 per kg to Rs 5.36 per kg, and on rice from 94 paise per kg to Rs 5.89 per kg. The rising per unit subsidy boosted off-take, and surplus stocks declined to 2.9 million tonnes in January 1998 — the lowest level in recent years.

In response, in 1998-99 the Government increased the issue price for APL families. This restrained the increase in subsidy per unit, but produced a rapid rise in surplus stocks to 7.6 million tonnes in 1999 and then 14.7 million tonnes in 2000. Subsequently, food stocks have taken off exponentially.

The excess stock today is more than the total stock in 1995, the year in which stocks rose to a (then) record high! And more stocks are still pouring in! This has led to a slashing of issue prices for APL consumers, increased allocations to BPL consumers and introduction of the Antyodaya Anna Yojana and other schemes. The Government is trying to reduce stocks by selling at below cost, both within the country and for export, thus subsidising consumers outside the country. The issue price policy has thus come full circle.

Meanwhile, throughout this period, the MSP has risen every single year — from Rs 340 in 1994 to Rs 620 in 2002 per tonne of wheat, and from Rs 330 to Rs 560 for rice. On many occasions (including the current year) the MSP fixed by the Government was reportedly higher than the recommendation of the Commission on Agricultural Costs and Prices (CACP).

There is a policy dilemma here. If issue prices are raised commensurate with the increase in MSP, the subsidy per unit dis-

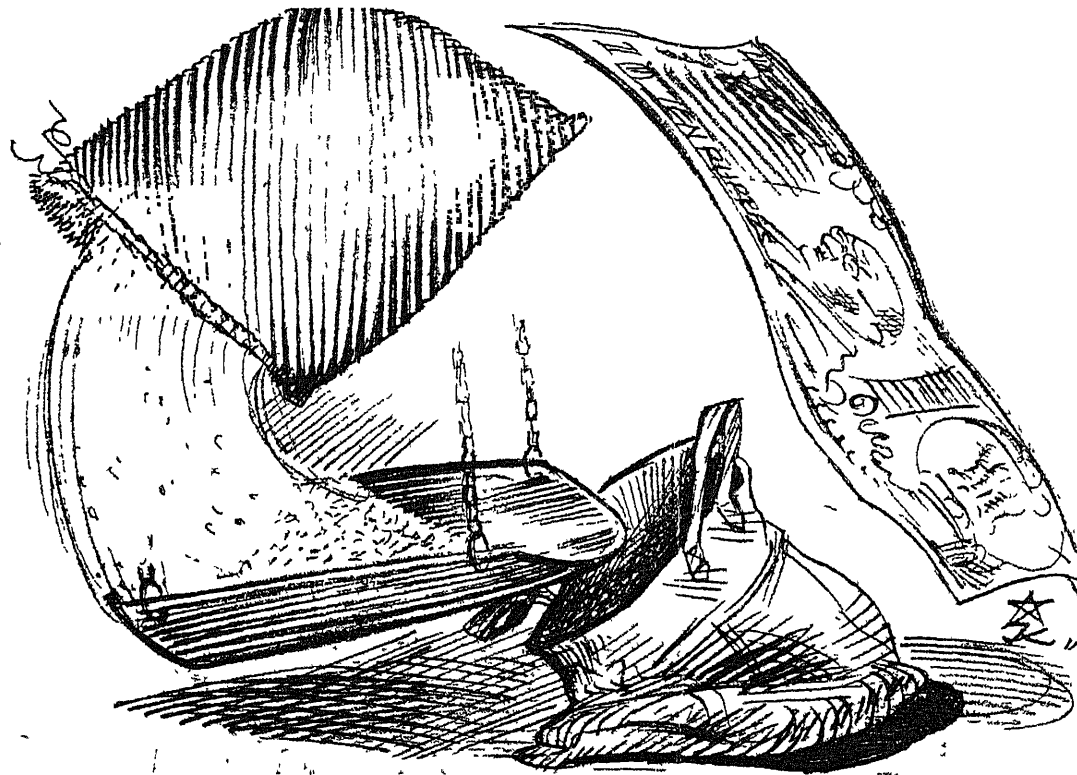
tributed is contained but off-take drops, the undistributed stocks rise and the entire operation becomes more of a farmer support scheme (though it is not clear whether the farmer really gains from such a policy). The subsidy increases, though this is not attributable to the consumers.

The Government is also attacked on the grounds that its actions have harmed the poor and rendered the PDS irrelevant. If issue prices are frozen or reduced, off-take improves, and food-stocks come down, but the subsidy per unit is high. Once again, the subsidy bill keeps increasing, here, the increase in subsidy gets attributed to the consumers. In either eventuality, the subsidy

rent system of MSP and unlimited purchase obligation should eventually be replaced by a system by which both purchase prices and quantities are fixed by a market-linked process.

Purchases should be on a quarterly basis. Quantities should be limited to the amount expected to be lifted in the next quarter so that, at no stage does the Food Corporation of India (FCI) hold any more stocks than required by the buffer stock policy. Purchase prices should be fixed by a tendering process, and thus linked to market prices.

The present system of fixing prices administratively (or politically) on the basis of the recommendations of the CACP should be



keeps increasing and the Government faces a Hobson's choice — whether to subsidise the consumers or the producers (and others) who stand to gain from the existing system!

Clearly, food subsidy cannot be reduced by tinkering with selling prices, without tackling the issue of procurement and of purchase prices. Yet this issue is almost completely neglected in discussions on food subsidy. The latest Economic Survey hinted at the need to reformulate the agricultural price support policy framework — but the Budget does not contain any such proposal.

Proposed reform

The only way out of this bind is to get out of the commitment to buy all the grain offered at a pre-determined price. The cur-

given up. The reform proposed — purchase at market-linked prices limited to actual needs for PDS — will depoliticise this issue. The abolition of MSP change can be done gradually, starting with wheat, where the international market is very broad.

For this to succeed it is also necessary to free the domestic market from the present restrictions on movement and stockholding limits. The latest Budget has announced the intention of the government to have a countrywide integrated market for agricultural products. This needs to be implemented at the earliest.

Since substantial investments may also be required for private trade to play the role it would have to, the Government should, as a measure of comfort, commit that these restrictions would not be re-introduced ex-

cept in times of war or famine. As the domestic market develops, the FCI can reduce the amount it holds by also contracting with third parties for grain deliveries to States for the PDS requirements.

This will replace the present system by which the FCI buys the grain, holds it and moves it. In essence, the FCI will serve more as an organiser and facilitator of foodgrain movement rather than as a physical procurer and mover.

This is all very well, but what about the farmers? To implement such a reform without protecting the legitimate interests of farmers would be neither desirable nor feasible. Alternatives to MSP must, therefore, be found. The MSP system has been serving three functions.

First, it has been a signal to farmers on crop selection, giving them short-run price certainty and enabling them to plan a proper cropping mix. Second, it has stabilised foodgrain prices on the downward side by acting as a floor. Third, it has functioned as a producer subsidy. The proposed reform would intentionally eliminate the third function, but the other two, which serve a useful and necessary economic purpose, will still have to be met through other instruments.

Indeed, if these objectives can be met through other means, it would make it easier to win acceptance for the removal of the producer subsidy. Forward (or futures) markets can provide an effective alternative to the MSP for this purpose. A farmer can hedge his crop and fix his price in advance at no cost to the exchequer. An agency or board can offer a guaranteed price (as distinct from a support price) to small farmers, purely functioning as a retailer of futures or options hedges without incurring any price risk.

Whether the hedging is undertaken directly or through a public or private sector intermediary, the effect is that, unlike under MSP, the decisions of farmers will be linked to market prices (and the process will be depoliticised) without subjecting farmers to price uncertainty. Another benefit of futures markets is that they generally have a short-term price stabilising influence. In a welcome announcement the Government has announced its intention, in the Budget this year, to expand futures and forward trading to cover all agricultural transactions.

World market prices, on an average, fluctuate less than agricultural prices in any country. More openness to import and ex-

port of foodgrains would, therefore, help stabilise prices. Physical restrictions on international trade in foodgrains have been abolished.

A policy that affords reasonable and predictable levels of protection to Indian farmers but does not completely shut out imports, would serve the country well. Food security is a crucial consideration — no less relevant today than in the 1960s. But in today's India, where foreign exchange reserves are ample, there is no compulsion to hold physical stocks.

The FCI could hold at least part of its requirements of buffer stocks not physically but in the form of futures or options in international markets. When necessary, grain could then be brought into the country. Stockpiling purchasing power is a good substitute for stockpiling grain.

Apart from helping cut the food subsidy without reducing food security, these reforms will also have benefits for farmers. They will be able to get international prices for their produce and can shift to those crops for which there is real demand. This should, at least partly, compensate them for the loss of the producer subsidy on selected crops.

The second benefit is in the long term. The current MSP regime, which focusses on certain water- and fertiliser-intensive crops and over-prices them, has a negative environmental impact. It has contributed to depletion of groundwater resources, and to loss of fertility from intensive cropping and excessive use of fertilisers. Its removal would, therefore, be a long-term environmental benefit to future generations of farmers.

Most of the policy changes suggested here have been accepted (though not implemented) by the Government — except the crucial one of abolishing the MSP regime. But the other initiatives will have no impact unless they are accompanied by that crucial missing link. The political implications of the change are considerable and will have to be carefully managed. The reforms will have to be fully explained to the farming community, pointing out the long-term benefits to them as well as the short-term alternative measures taken to protect them. It is a difficult path to tread, but not an impossible one.

Just five years back, the huge under-recoveries in diesel prices seemed an insurmountable problem. Today, there is near unanimity that diesel prices should be linked to international prices. A similar effort can help in not only bringing down the food subsidy bill but also in effecting lasting improvements in agriculture, and in ensuring environmentally sound cropping patterns and a more sustainable system of food security.

(The authors belong to the Indian Administrative Service. The views expressed in this article are personal.)

Why we need a water regulator

S K SARKAR & KAUSHIK DEB

AN outcome of the low level equilibrium in India's urban water sector is that most service providers are not financially viable. The current institutional and regulatory framework, in fact, does not encourage efficiency. Little emphasis exists on performance improvement, rather, the current focus is only on physical expansion of water supply systems. There are no incentives to bring about changes in the existing unsustainable management of the water system.

Incomes generated by local bodies as well as many state institutions fall acutely short of requirement for capital investment, operation, maintenance and upgradation of water services. Water charges are not sufficient even to cover operating costs. Thus, service providers depend heavily on state government grants, loans and subsidies for daily operation, and central government for capacity augmentation.

To address some of these issues, a greater role for private sector to supplement efforts of the government and community based organisations is often suggested. Interestingly, existing institutions may not be able to evolve such approach because of political compulsions and weak governance. Admittedly, a fall out of the privatisation process is the likely increase in transaction costs. That will require mitigating. Activities of monopoly service providers would have to be regulated for protecting consumer interests. A strong regulatory framework would not only protect investor interests, but also balance them with public interests. Such a framework has to be outside the existing governmental set up, and should have an arms-length relationship with state governments as well as local bodies. Otherwise, no enabling environment will be created to ensure protection of consumer interests, and attract private investment.

Even before the private sector participates in the water sector in a substantial way, a regulator must be positioned. First, there is a need to improve operational efficiency of utilities by aligning cost of supply with tariff. This would make these services more sustainable by incentivising utilities in the sector to improve their services and eventually make them more attractive to the private sector. Secondly, there is the need to set standards of service, and enforce the same. Only a regulator would be able to take an independent and long term view on these issues.

In this respect, recent initiatives at the central level as also in states such as Maharashtra and Gujarat are noteworthy. Nevertheless, certain issues should be kept in mind. First, there is a need for reconciliation of regulatory jurisdiction over local bodies in view of the 73rd and 74th Constitutional Amendments, thus calling for their consent. Second, tariff regulation over the urban bodies can be indirect wherein the regulator can set tariff principles. Compliance with the guidelines then must be linked to the grants assistance from governments to these urban bodies. Tariff regulation should improve efficiency, and align cost of supply with charges on a progressive basis keeping in mind universal service obligations. Third, the regulator must lay down the quality of service and ensure their compliance. Fourth, water quality should be regulated either through regulatory intervention or orders by a designated authority. Finally, the issue whether the water regulator should be merged with the state electricity regulatory commission may be examined from the view point of better economies of scale and avoiding plurality of regulatory bodies at state levels.

(The authors are with TERI, New Delhi)

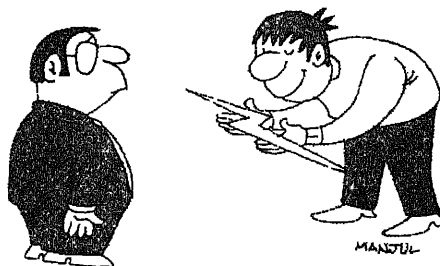
Privatising electricity distribution

RESTRUCTURING the electricity business through corporatisation and subsequent privatisation has been the model followed in Orissa in 1995. This has now been adopted by some states as part of power sector reform in India. The ongoing process in Delhi for the restructuring of the DVB (Delhi Vidyut Board) and privatisation of its distribution business shows that some groundwork will have to be undertaken for reaping expected benefits out of this exercise.

The government's commitment and regulatory involvement in the privatisation process are somewhat unique to Delhi. The three public distribution companies into which the DVB has been, *inter alia*, split, have been put into bidding process for their privatisation, based on certain criteria. Select bidders will have to ensure efficiency gains over a period of five years through the reduction of AT&C (aggregate technical and commercial loss, a euphemism for T&D loss combined with loss due to revenue collection inefficiency), beyond a threshold limit as fixed by the government. Further, any additional efficiency improvement will have to be shared with the chosen bidders, who will also be assured of a 16 per cent rate of return on issued and paid up capital.

The Delhi government will also provide a comfort level to the Transco by providing a loan of Rs 2600 crore to bridge the gap between the cost of power supply and the paying capacity of the distribution companies, to be repaid along with interest after a period of three years. In sharp

S K SARKAR & V SHARMA



contrast, the publicly owned Gridco in Orissa was not provided with such comfort in the beginning, and the hands off approach of the Orissa government had led to its financial losses mounting to the extent of Rs 1250 crore by 2000-01.

The starting point of taking AT&C loss as the base for the purpose of efficiency monitoring appears to be a better step than the usual practice of taking the T&D loss number as their base. For instance, the T&D loss level in the power sector in Orissa was benchmarked by the World Bank in 1996-97 at 39.5 per cent while its actual AT&C loss, following the Delhi methodology, would have been 67 per cent according to the Kanungo Committee Report (2001). The inaccurate methodology for calculating the loss figure did not bring out the enormity of the task involved on the part of the regulator and the private com-

panies in Orissa, and this brought a bad name to the reform process in the power sector.

Nevertheless, the Orissa privatisation exercise can offer some positive lessons to Delhi as also to others. First, even after the privatisation of the electricity distribution business, continuous support of the law enforcing machinery for some harsh measures must be provided. Precisely this is one of the reasons why AES of the United States (one of the CESCO shareholders in Orissa) effectively withdrew last year, citing law and order problems, and lack of political support to cut off power supply to non-paying and illegal connections.

Second, in Orissa, the issue of rural electrification and access to disadvantaged groups in urban areas have been neglected by private service providers. There is a need to avoid this tendency in the privatisation exercise.

Third, the Orissa example has shown that unless the mindset of the employees of the distribution licensee is gradually oriented towards better customer service, the quality of service will not improve in near time frame. Therefore, the role of the electricity regulator in framing quality of service regulation and enforcing the same has become very important.

Finally, proceeds of the privatisation should be ploughed back to the sick power sector for its improvement, rather than it being utilised for other purposes as has happened in Orissa.

(The authors are with the TERI, New Delhi)

DEBATE



Sunita Narain
Director, Centre for Science & Environment, New Delhi

IT WOULD be the first to argue that the Kyoto Protocol is a watered down and ineffective agreement — mostly because the world's biggest polluter, the US, wanted it so. But I would also argue that India should ratify the Kyoto Protocol. Simply because we have no choice but to demand effective and measurable action from the industrialised North against global warming and the Protocol is the only game in town. The multilateral agreement sets legally binding targets for industrialised countries to reduce their greenhouse gas emissions — roughly 7 per cent over their 1990 emission levels.

Emerging science tells us that climatic change is real and will result in greater climatic variation and extreme events like floods, droughts, cyclones and sea level rise, leaving poor people living at the very margins of survival even more vulnerable. Given our poverty, it is in our interest to mitigate the impacts of climate change. Even sceptic George Bush admitted that climate change threats are real in his ridiculous 'clean skies initiative' which he released some weeks ago.

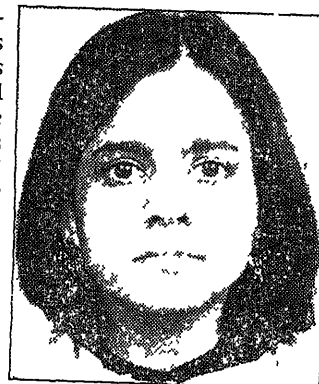
But even as the issue of scientific validity is settled, how we will combat climate change is certainly not. Climate negotiations are hard economic negotiations as carbon dioxide emissions — from fossil fuel used in energy to automobiles — are strongly related to economic growth. This is why Bush, in rejecting Kyoto, has proposed a plan in which his country will do nothing to cut emissions. He wants to leave it to the market. Industry will take "voluntary action" and in his dream plan the US economy will continue to grow as he sets a target — 18 per cent — for reducing greenhouse gas intensity, not emissions.

Bush's dream will be our nightmare. In the 1990s, US greenhouse gas intensity — a measure of emissions per unit of gross domestic product — fell by 17.4 per cent even as emissions continued to rise. It is estimated that emissions in 2012 will be 30 per cent over the 1990 level.

As his country had signed the Kyoto Protocol and agreed to cut emissions, in actual fact it will be 37 per cent above the agreed Kyoto target.

Criminal. An "ordinary" polluter would have been in jail or heavily penalised. Instead, the Indian ministry of external affairs (MEA) has said that it "welcomes" the Bush approach. In other words, it tacitly endorses a renegade plan.

This when we need to ask for more, not less than what the Kyoto Protocol promises. We need 'environmental space' to grow. And space is limited. The Intergovernmental Panel on Climate



carbon per capita

Change (IPCC) estimates that greenhouse gas emissions must stabilise at around 450 parts per million (ppm) by the end of the 21st century to avoid the worst impacts. To do this, the world needs to immediately reduce its emissions by 50-60 per cent. For the US this means a reduction in carbon dioxide emissions from over 5 tonnes of carbon to less than 0.5 tonnes of

carbon per capita. Impossible. But what it tells us is that we need drastic action to avert climatic catastrophe. This is why we need a legally binding framework, which not only provides incentives to all nations to live within their emission limits but also helps to promote a rapid transition to a non-carbon energy economy.

The Kyoto Protocol provides us an opportunity. The key flaw is that the protocol today is designed to buy the cheapest emission reduction from the developing countries to help the North meet its targets. But this very principle of economic effectiveness makes it ecologically ineffective. The reason simply is that the cheapest emission reduction options lie with the inefficient fossil fuel economy of the South, while the need is to use the Protocol mechanism to invest in renewable energy systems.

The solution is to use the Protocol to build zero-carbon technologies in our part of the world, which is still unconnected in large parts, to the fossil fuel grid. This will also give the poor, who under-utilise the global atmospheric space, a fair share. But taking this approach will demand more political sagacity from our politicians who continue to protect their dinosaur-age oil and automobile industries.

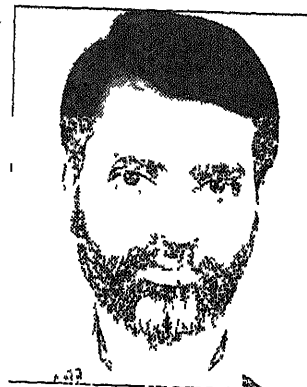
Barun S Mitra
Founder,
Liberty Institute

THE interests of US and India coincide on the question of calling the global warming bluff and rejecting the Kyoto Protocol. First, the science of global warming is suspect. Ten years since the UN Framework Convention on Climate Change was established in 1992, scientists at IPCC have only been able to warn of a range of warming scenarios from an increase in temperature of 1.4°C to 5.8°C in the next one hundred years. With that range, the power of predictability of their models are clearly very limited. These climate models also show that the impact of Kyoto will be marginal.

Estimates of economic costs of warming too are unclear. Total cost has been estimated to be USD 5 trillion. On the other hand the cost of implementing Kyoto just for the US alone has been put at over USD 300 billion. Compare this to the cost of providing clean drinking water and sanitation to entire world at USD 200 billion. And the latter could save 2 million lives each year now, and prevent another half a billion falling ill. Check out Bjorn Lomborg's widely reviewed book *The Skeptical Environmentalist*.

Another way of getting a perspective on the future warming would be to compare real experiences from the past. The proponents of global warming stress the possible revival of many diseases such as malaria. However, a study published in *Nature* last month, found no evidence that the emergence of malaria in parts of Africa in the past decade or so had any relationship with warming. Indeed, if one were to look back one hundred years, when the average temperature is estimated to have been about 1 degree C lower than at present, malaria, cholera, plague and many other epidemics periodically swept through most parts of the world. Humans died like flies in a cooler world where flies, mosquitoes, and germs ruled supreme.

Clearly, the Kyoto Protocol, and the global warming agenda that is behind it, hides a lot more than what it actually says. If Kyoto were about improving



economic and energy efficiencies, there would be no need for such a protocol. The best way to improve efficiency is to unleash a competitive market place where efficiency gains are a necessary condition for survival. Kyoto speaks of emission trading and market based instruments, but on the other hand undermines the market by promoting the global environment facility and the clean development mechanism. Both these schemes have opened the way for transferring favours to the chosen few at the cost of others.

Consider air pollution in India. We seem hardly concerned that the most significant health hazard is indoor air pollution caused primarily by the domestic *chul-lah* in an unventilated environment, and dust. However our focus is on vehicular emission in a country that has the lowest vehicular density in the world! Government regulations and taxation policies have ensured that

20-year-old vehicles with 50-year-old technologies continue to chug along, and yet import of new and second cars of newer models and cleaner emissions are made prohibitively expensive.

Contrast this with the US experience. Even with its relatively more market friendly environment, in the past thirty years alone, the US GDP has increased over 150 per cent, energy consumption by about 45 per cent, vehicle miles travelled increased by 140 per cent, population by 35 per cent, yet the emission of six most common pollutants have fallen by almost 30 per cent. There is every reason to believe that a freer market would have ensured even more dramatic improvements.

Embracing the forces of the market, rather than the Kyoto Protocol, would induce efficiency gains, and lower energy intensity of the economy even while increasing consumption thereby making the possibility of man-made global warming even more remote than it already is. And the resultant economic development will increasingly insulate man from vagaries of nature. Apparently, mother nature is disinclined to favour those of her children who seek to reduce consumption. Clearly she does not want her bounty to be left unused as the Greens would have us believe.

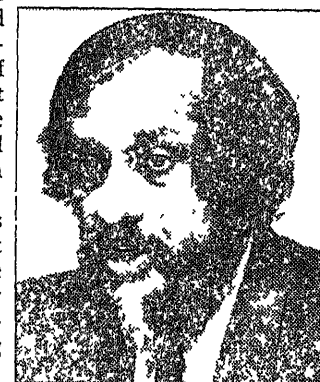
PERSPECTIVES

Kyoto: Ratify or scuttle?

Environmentalists have for long been warning us of global warming because of the release of greenhouse gases from fossil fuel use. The Kyoto Protocol intends to reduce these emissions. But is the 'science' valid? What about costs and benefits? We put the questions to an expert panel:

Dr R K Pachauri
Vice Chairman,
IPCC

CLIMATE change represents a serious threat to every part of the globe, and it would be ridiculous to believe that this is just another issue being pushed by the West down the throats of the developing world. If this was not the case then we would have had a very different Framework Convention on Climate Change which was agreed to at the Rio Summit of 1992. In fact, the very first draft of this Convention was tabled by the Indian delegation. The draft, of course, underwent several changes on the basis of discussions and negotiations between the parties involved. The Convention was based, therefore, not only on substantive inputs provided by India but also by several other developing countries. Similarly, the Kyoto Protocol,



which gives practical form to the Framework Convention was arrived at on the basis of intensive, and at times acrimonious, discussions. The fact that the world has still not ratified the Protocol clearly indicates that it is not the product of any conspiracy hatched by the rich nations against the poor. India as a major developing country must support the Kyoto Protocol by arranging to ratify it as early as possible. This becomes even more important for symbolic and practical reasons because India would be hosting the eighth Conference of the Parties to the Convention in October-November this year.

The growing concern about climate change is based on very convincing scientific analysis. Mention must be made in this context of the outstanding work of the Intergovernmental Panel on Climate Change (IPCC), a body established in 1988 jointly by the World Meteorological Organisation (WMO) and the United Nations Environment Programme (UNEP). The IPCC, which functions with a very lean Secretariat based in Geneva, has been able to mobilise the world's leading scientists and experts drawn from all over to come up with a series of three successive assessment reports on the whole range of questions related to climate change, as well

as a set of special reports on very specialised subjects in this field. The work of the IPCC, which forms the basis of our current knowledge on the prospects of climate change, its likely impacts, and methods to mitigate it, has been widely acclaimed as rigorous, objective and policy relevant (but not policy prescriptive). It is, therefore, devoid of politics and subjective bias, which is assured by a painstaking review process in which all member nations participate, the largest number of which come from the developing nations.

There are no doubt uncertainties in the prediction of future climatic changes by virtue of the very complexity of the system that we are dealing with. But, these uncertainties are narrowing as more and more research is undertaken on various aspects of climate change. However, there are some areas on which further work is required urgently, such as on the impacts of climate change in different parts of the world. On current evidence, the impacts on countries of the tropics would be far worse than on countries in the temperate zones. For this reason alone much greater research in this field should be carried out by Indian scientists, a matter that government in this country should facilitate and fund to a greater degree.

There are six gases identified in the Kyoto Protocol, the cumulative emissions of which have led to the threat of climate change. Of these, CO₂ is the largest, the major source of which is the combustion of fossil fuels. Mitigation of emissions of CO₂ would require not only increased efficiency in the use of fossil fuels but a major shift to low carbon or non-carbon fuels such as solar, wind and sustainable use of biomass. Certainly, such a shift can occur if in the price of energy the externality of global environmental effects is internalised. Free market solutions will not work, and regulatory systems such as embodied in the Kyoto Protocol are inescapable. This may not be the most perfect solution, but in the immediate future it is the only answer, given the difficult journey it has undergone to reach a stage of likely ratification. India must, therefore, ratify the Protocol urgently, as a major developing country.

Specific duties on petro products

A distortionary approach

Asha Ram Sihag

TO KEEP the March 31 deadline for dismantling the administered price mechanism (APM) for the petroleum sector. Several issues would need to be resolved.

Some of these, such as the question of continuing subsidy on LPG and kerosene and for freight equalisation for remote areas and providing protection against price volatility in the international market, are expected to be addressed by the Finance Minister, Mr Yashwant Sinha in the coming Budget.

It has been reported that for achieving the objective of greater price stability than that prevailing in the international markets, specific duties of excise for petroleum are being considered.

This is not the right approach for several reasons.

The question itself is premised on a certain lack of faith in the ability of competitive markets to deliver what the consumer desires, including a modicum of price stability.

It must be noted that, internationally, the competitive retail markets for petroleum products offer greater price stability than what is seen in the international wholesale trade.

There is a sound theoretical basis for it. Because of large costs of entry, petroleum products retailing, even in the markets where competition is legally permitted, is characterised by an oligopolistic market structure.

Behaviour of firms in oligopolistic markets corresponds closely to the kinked demand curve model, because starting from the current price, if any firm raises the price, it stands to lose market share if its competitors do not follow suit.

It is a standard result of this model that prices for the consumers would remain stable over a wide range of variation in the costs of the firm, including that of sourcing in the international markets.

Such behaviour has been observed in the industry around the world. Firms are not known to raise prices unless there is a prolonged and stable rise in the international

market in the medium term.

While proposing specific duties, it has been argued that *ad valorem* imposts tend to exacerbate international price fluctuations. This is wrong.

By their very nature, *ad valorem* duties would impose the same burden of taxation on each rupee, comprising the price including any increment in it from any pre-specified level.

Against this, specific duties

may affect competitiveness of the petroleum-intensive exporting industries at lower international crude prices.

While these are valid arguments, they could be brushed aside as mere niceties. The most compelling argument against such sectoral price stabilisation comes from its inconsistency with the stabilisation of the external sector of the economy.

India imports 70 per cent of the crude requirement for the

If the basic duty structure is tampered with for the petroleum sector, there could be demands from other sectors and before long, the entire tax structure would be riddled with holes. A specific duty structure for one sector alone when others are on *ad valorem* also introduces distortions in relative consumption as the prices vary in the market.

would create an asymmetry of tax treatment above and below a pre-specified price level. However, such an approach would dilute the achievements of indirect tax reforms over the last decade, which have been aimed at achieving a simple and progressive tax structure.

If the basic scheme of this structure is tampered with for the petroleum sector, there could be demands from other sectors and before long the structure would be riddled with holes.

A specific duty structure for one sector alone when others are on *ad valorem* also introduces distortions in relative consumption as the prices vary in the market.

One of the underlying principles of market-oriented reforms is that free market prices reflect the relative scarcity values of ordinary consumption goods and, therefore, the market is able to allocate resources most efficiently.

Favouring a price level around which the specific duty is set in the face of change in global prices introduces a disconnect with the global resource allocation signals and

petroleum products it consumes. The petroleum sector accounts for about one-fourth of the value of imports and exports. In such a situation, any significant rise in the international price of crude (and therefore, petroleum products) would amount to a trade shock.

Apart from running down forex reserves in the short run, the policy options available to the government in the medium term to deal with such a shock are to discourage imports and to encourage exports and the instruments available are tax rates, interest rates and exchange rates.

In the absence of a drastic export response (unlikely in the context of oil price shocks which are globally recessionary), to be effective, the policy must reduce demand for imports as well as the aggregate domestic demand.

A specific excise duty on petroleum sector would be contrary to this goal and put the burden of adjustment disproportionately on the rest of the economy.

(The author is a senior fellow at TERI, New Delhi. The views are personal.)

Energy projects can reduce poverty

S K SARKAR & REKHA KRISHNAN



ENERGY sector operations

have been recognised as contributing to poverty reduction through their support to economic growth through the trickle down effect. But,

their direct contribution to poverty reduction has been seldom acknowledged, mainly because of lack of a systemic approach to assess such impacts.

Energy projects can contribute to poverty reduction at the macro and micro levels in many ways. At macro level, they contribute to resource savings on account of energy efficiency gains, forex savings/earnings and increase in tax revenues due to additional employment. These in turn can be invested in poverty alleviation programmes. Projects that promote efficiency in energy supply may also lower the price of energy making it more affordable. Backward linkages of energy development such as with sectors like iron and steel manufacturing, transport, etc, will also induce economic growth. However, for such benefits to flow to the poor, appropriate

pro-poor policies and strategies need to be in place.

Similarly, at the project site, the direct impact on poverty will be felt through employment created during the construction and operation stages of the project. Those in the vicinity of the project may, however, be affected by environmental pollution, and adverse social impact such as displacement of people from the project site.

Projects that provide access to modern forms of energy, increase its reliability, and/or improve its affordability can result in poverty alleviation at a micro level. Energy consumption in various sectors can benignly impact on poverty in different ways. Take the case of households. In this sector, uses of energy include cooking, lighting, water heating, and space conditioning. Providing poor households with access to superior energy sources like electricity or LPG to replace traditional fuels such as fuel-wood, cow dung and agricultural residue for cooking/lighting/heating has important economic and social benefits.

The combustion of traditional fuels is associated with high levels of indoor air pollution and consequent health hazards. In fact, nearly 10 per cent of

premature deaths among women and children have been attributed to the use of biomass fuels. If these households were to gain access to alternative cooking fuels, health hazards could be considerably reduced. People, mainly women and children, would also be spared from the drudgery and discomfort in collecting firewood, leaving more time for productive activities such as education, craft, etc., as additional sources of income, and spending time with the family.

Energy-poverty linkages also flow from other energy-consuming sectors. The provision of improved energy services to agriculture can contribute to poverty reduction indirectly through possible increase in farm income and directly by facilitating increase in the gross cropped area, which in turn increases farm employment. In the industrial sector, too, provision of energy in an energy deficit area can promote industrial growth by encouraging new industries or enhanced capacity utilisation in existing industries. Not only will this lead to the creation of employment opportunities in the area but would also set off a multiplier effect on output and employment throughout the economy.

Recognising the positive impacts of access to modern forms of energy many developing countries including India have attempted to promote the use of LPG and kerosene by providing these fuels at subsidised rates. Despite these moves, biomass fuels are the dominant cooking fuel in 90 per cent of rural households and 30 per cent of urban households in India. Evidently, these steps are not adequate. First, the use of fuels such as electricity and LPG entails high connection costs and unless these too are subsidised, the fuel subsidies could be quite pointless. Second, lower prices do not ensure consumption, availability is crucial, as is the willingness of people to accept the solutions thrust on them by others, sometimes in an unsolicited manner. Third, if consumption of these fuels is mainly by households that are reasonably well off (as is clearly the case with LPG), provision of the fuel at subsidised prices may result in 'leakage' of subsidies to non-deserving households. Essentially, if energy sector reforms were to make a dent on the quality of life of the poorest of the poor, such households must be unambiguously targeted. (The authors are with TERI, New Delhi)

Net telephony: Onto a new frontier

Asha Ram Sihag

THOUGH it prohibited Internet telephony when it came into force, the National Telecom Policy (NTP 99) allowed the government to take appropriate action in response to developments in the sector

Recently, the Government sought the TRAI's recommendations on allowing Internet telephony in the country, and the latter initiated public consultations. While inviting public comment, TRAI made a distinction between VOIP, seen as a largely technological issue, and public Internet telephony.

In formulating its recommendations, TRAI should be guided by some unexceptionable principles.

- Integrity of the existing licences and rights and obligations thereunder, should be upheld to the maximum extent possible to avoid legal and other complications,

- Efficiency in supply of services in a technology-neutral way, with due regard for the potential for convergence, should be promoted,

- Commercial free-riding on public good resources such as the public Internet should be discouraged and, at the same time, such resources should be allocated to the most disadvantaged people on equity considerations, which in the case of telephony would mean people targeted for USO services.

- The policy framework should be monitorable and implementable, and,

- It should be consistent with practices elsewhere in the world.

On these considerations, it would be apparent that VOIP should be permitted to existing licencees in all categories (except ISPs), as that would enable these licencees to evaluate their technology options cost-effectively and without diluting their obligations under the licences, particularly with regard to QoS.

This would not be the case if Internet telephony (over public Internet on a best effort basis) were allowed as it would require dilution of the QoS. If both VOIP and Internet telephony are allowed to existing licencees, it may create serious monitoring difficulties on the QoS front.

Permitting operators to evaluate their business options against all available technology platforms is necessary if convergence is to come happen. So long as there is clear commitment by the regulator and the government to promote competition through an appropriate market structure to be achieved in each of the licence categories, and there is rel-

allowing the existing licencees the option of another technology platform, competition will ensure that the eventual gainer is the consumer and no undue benefits accrue to the licencees.

While the existing licencees should be allowed the use of the VOIP platform without any dilution of QoS stipulations, this should not be taken to mean that all use of the VOIP, particularly for in-house networks by organisations, should now need to be licensed. As these are not public service providers, these should continue beyond the pale of licensing, as is the case in the EU.

There are two attributes of Internet telephony that call for differential treatment from VOIP. One is that the quality of service would only be on a 'best effort' basis. The other is that the public Internet is a public good which, if allowed to be exploited on commercial considerations, would suffer the tragedy of leading to socially-excessive congestion.

There is also the equity consideration — that a free public resource like this, as far as possible, should be allocated in favour of the telephonically-disadvantaged.

Keeping these considerations and the need for separating VOIP and Internet telephony for the ease of enforcement of QoS standards, (public) Internet telephony should only be allowed through new Rural Internet Telephony (RIT) licences valid only in USO areas. These would have lower QoS standards and tariff rates and extremely easy entry conditions. While these would spotlight the failure of the existing licencees to implement their roll out plans to meet their USO commitments, it is not proposed to dilute their USO obligations in any way because RIT would only provide a different and inferior product.

RITs could be of great interest to post offices, rural unemployed youth, NIC, companies into rural marketing, such as ITC, fertiliser companies, NGOs, etc. This distinction between Internet telephony and VOIP for licensing purposes would be consistent with that prevalent in the US and Canada. In sum, in this scheme there would be a new category of RIT licencees. The existing and future licencees of BSO, NLDO, ILDO and CMSO would get the option of the additional technology platform of VOIP, while to maintain the integrity of the existing licensing scheme, the ISPs would get nothing.

(The author is a Senior Fellow, Regulatory Studies and Governance Division,

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Talk tough, act even tougher



ARUN SHOURIE

ALTHOUGH they have done a great deal to lift us out of the confines of traditional economics, in one sense ecologists too remain under its shadow. There is a lot of discussion in their literature on "quantitative restrictions like bans versus economic instruments like graduated taxes and incentives" They have come to accept the dicta of economists in this regard: taxes and incentives are better than bans etc, and these taxes and incentives should be revenue-neutral, that seems to be the general consensus. But in considering the relative merits one question surely ought to be reckoned: which is going to be easier to enforce?

In several instances, graduated taxes and incentives open the doors to evasion and corruption. What the stern stand of the Supreme Court has accomplished in regard to buses and three-wheelers plying in New Delhi could just not have been achieved swiftly enough through graduated taxes and incentives.

Our experience holds four lessons:

- Debates among economists are endless, the harm that occurs during the time one is waiting for them to agree upon an ideal solution too has to be reckoned,
- Once you have chosen an instrument, do not wait for fine-tuning it, sometimes a blunt cudgel alone will work, often the damage that is being inflicted is so grave, that the cudgel must be wielded without delay;
- When governments opt for traditional economic instruments like taxes and incentives, these must be high enough to actually alter conduct: all too often, when public pressure for doing something about the damage that is being caused by a product or a process becomes so intense that governments just have to do something, they impose the tax etc, but they peg it so low, they peg the penalties for non-compliance so low that the violation continues as it was, therefore when correctives are announced, observers must beware of tokenism.



ment. The harm that politicians and others cause when they gang up to thwart court orders on switching to better fuels, on unauthorised constructions and colonies is not limited to the fact that remediation of that particular ill is delayed or diluted. They compound cynicism. They give heart to those who care not for the injury they inflict on the environment and on their fellow-beings. "Arrey bhai, why bother? Let the courts go on giving their orders, in the end they will amount to nothing — that is what the violators conclude. Each postponement, each dilution makes them confident that in the end they will be able to bend the system.

FOURTH, there is an opportunity round the corner that we should all gear up to put to use. Finances of all governments — Centre as well as States — are already in dire straits. Within three-four years they will have reached a crisis. The

The harm that politicians and others cause when they gang up to thwart court orders on switching to better fuels, on unauthorised constructions and colonies is not limited to the fact that the remedy to that particular ill is delayed or diluted. They give heart to those who care not for the injury they inflict on the environment and on their fellow-beings

weak political class will eventually have to implement the obvious correctives. The way in which the Government of Rajasthan stood up for three full months to its employees, the way the Government of Kerala is standing up to its employees today — these are symptoms.

Thus, governmental finances will

external account presented in 1990/91. Between now and then, we should inundate people with the rationale for the steps that need to be taken — so that by the time the bind becomes unbearable, the rationale has seeped into the minds of all concerned.

For instance, there really should

subsidised kerosene really reaching the poor? Or has the subsidy — by now it exceeds Rs 7,000 crore — and the resultant wide gap between the prices of kerosene and other derivatives become the cause of massive adulteration and profiteering? What proportion of the Rs 14,000 crore that are spent to subsidise chemical fertilisers reach the farmer, and what proportion manufacturers pocket?

The country spends Rs 35,000 crore every year ostensibly for banishing poverty. In its mid-term review of the Ninth Plan, the Planning Commission had pointed out that if all anti-poverty programmes were to be scrapped and the money were to be sent directly by money-order to the Below Poverty Line families, each family would be able to buy three kilos of rice per day and automatically rise above the poverty line! Could there be a more telling argument for

FIFTH, there is a leaf we should take out of what was done during Rajiv Gandhi's period. Governments across the country should set up mission-type teams to tackle some urgent problems — problems for solving which we have the technical and even organisational capacities. Everyone will have his list of such problems. The following will figure in almost every list:

- Fuels and energy sources that can replace fossil fuels,
- Treatment and utilisation of urban waste,
- Cleaning up the major lakes and rivers,
- Organic fertilisers, insecticides and pesticides to replace chemical ones,
- Regulations that would ensure that

remember reading in school Pandit Nehru's cutting observation: we bathe twice a day, but don't think twice before spitting on the road; we sweep our houses clean ever so meticulously, only to throw the muck out on the street. That holds true after all those decades. Except that now we can't get the municipal staff to clean up the street either, for fear of igniting a strike. And we can't outsource the function because of the Contract Labour Act! Restoring civic sense should be the first aim of religious organisations and movements, as well as of the efforts to introduce "value-based" instruction in our educational institutions.

Finally, a word of counsel from a well-wisher for our ecologist-ac-

All governments are in dire straits. But these finances will present an opportunity for pushing reforms. We should inundate people with the rationale for the steps that need to be taken — so that by the time the bind becomes unbearable, the rationale has seeped into the minds of all concerned

at least governmental and corporate buildings start getting built using energy-saving ideas,

- Inducing producers churning out carcinogenics — for instance, farmers growing tobacco in Andhra — to switch to alternative crops or products.

Sixth, we need to re-examine our attitude to international standards. It has become almost a reflex with us to denounce any suggestion that we do something about carbon-emissions etc. Indeed, we at once suspect another conspiracy. There are several reasons why this reflex deserves revision:

- We are large enough, and substantial enough to start feeling responsible for what we inflict upon the world;
- Many of the things that we would have to do in complying with the standards are things that we should be doing for our own, immediate good,
- A "permanently negative answer" seldom works for long: it can give us the fleeting satisfaction of having "stood firm" — but we are soon isolated and have to meekly fall in line.

Then, of course, there is the basic

twists. Their dedicated work and perseverance have made ecology a national issue. It may be that in the beginning policy makers were so apathetic that the minatory and strident pitch was necessary. But it has long since become counter-productive. Facts, reasoned argument would do the job. Ideas put into practice — as TERI's building outside New Delhi has done — would work even better.

Precisely because of the work that they have already done, precisely because so many of their forebodings are already staring everyone in the face, they can now proceed with greater self-assurance. Gandhiji writes at one point that every movement passes through five stages. First the authorities ignore it. Then they try to laugh it away. Then, as it doesn't go away, hey denounce it. As that too does not work, they seek to crush it. Having persevered through each of these, with its prophecies coming true, the movement comes to command respect — which, he says, is another name for success. Ecologists have come to command respect. They can now afford to act with the quiet confidence that respect renders possible.



ARUN SHOURIE

GDP: a whole new word

WE produce chemical fertilizers and pesticides. That increases the gross domestic product, and so it is growth.

Those fertilizers and pesticides can trigger cancer. Their overuse poisons the soil. Governments then spend on cancer hospitals, on soil-remediation. The victims go to doctors, they spend their life-earnings on battling cancer. Drug companies spend on developing drugs to fight cancer. Having hit upon one formulation, they spend money advertising their drug vis-a-vis that of some rival. Every step in this sequence — the expenditure on hospitals, drugs, doctors, advertising, soil-remediation — counts as growth. For every step increases the GDP.

X is a small businessman. Producing the car in which he goes to office increases the GDP, and therefore counts as growth. That the dealer shovels his margin into the price increases the GDP, therefore that too boosts Growth. If X does not have money to buy the car on his own, and borrows from the bank, better still — he helps expand the financial sector too, and thereby his car increases the GDP twice over. He can contribute to growth even more by not repaying the loan — the bank then has to deploy lawyers, and hoods, and the money it shells out to them is all growth.

On the way X gets stuck in a traffic jam. He keeps his engine on. He boosts growth — for the petrol he burns increases GDP. Stuck in the jam, he inhales fumes. That ends in respiratory ailments. Further growth, drugs, doctors. Distracted about what he has to face when he reaches office, he has an accident. The amount he will spend on getting the car back on the road too is growth. He approaches his insurance company with a claim; it refuses to honour its commitments, he engages a lawyer and takes it to court, that too swells the GDP, and thus boosts growth.

If, while X is at office, his car gets stolen, and the police set a posse to catch the thief — growth, for salaries of the policemen form part of GDP. The traffic jams, the difficulties in repaying the loan, the accident, the tussle with the insurance company, the lawyer's fees, unhinge X. He turns to a psychiatrist. The doctor puts X on mood-boosters — growth. The drugs, the bills, the troubles at office, the failing business ruin X's family relationships. His wife sues for divorce. Like her, X too engages a lawyer. The case takes weeks and weeks of the court's time — growth several times over.

With all these troubles, X's business goes bankrupt. Lawyers, accountants. The firm goes to the Board of Industrial and Financial Reconstruction (BIFR).

Listen to the ecologists: There's a need to rethink GDP, since every wrong step taken in growth's pursuit makes the next step in a harmful direction that much more likely — and inevitable.

BIFR asks Government for a revival scheme. Work in government, alternatives explored. Announcements in the papers. The Cabinet meets to assess alternatives. Salaries and fees of one and all — higher GDP.

X flees to the North East, and starts all over again. This time he establishes a company to supply timber. He engages a hundred workers, gives each a chainsaw. Armed with these lethal saws, the workers fell all the trees in a forest. The wealth of the region is destroyed. But the GDP for the year has been boosted — for income has been paid to destroy wealth.

ECOLOGISTS and others have been drawing attention to these anomalies — to the fact that the current definitions count the production of carcinogenics as growth and simultaneously they reckon the production of drugs to combat those carcinogenics as growth, that they count the production of goods as growth as well as the expenditure on scrubbing the pollution that results from the production of those goods as growth. Examples of the sort given above are staples of their literature. For this reason, several groups — Rethinking Progress, the Factor-10 Club — and individuals — Lester Brown's new book *Eco-Economy* brings the work of many of these together — have been urging that the world look again at what it stuffs into concepts such as the GDP, that economists and policy makers examine what they take to be growth.

In India, this is particularly necessary. The way we measure GDP yields at best a very gross estimate of productive activity in the country. In spite of everyone knowing this, the slightest fluctuation in the estimated GDP becomes the basis for elaborate theses — for gloom or elation. The imperfections of measurement apart, what has grown in the reference period is almost never the object of scrutiny.

To encourage growth in the North East, the finance minister announces excise concessions for industries that will be set up there. Cigarette companies, firms producing pan masala rush to the region. That is growth!

So the first thing we need to do is to heed the ecologists, and formulate measures that supplement a crude indicator like the GDP.

This is all the more necessary because every wrong step taken in the pursuit of growth as we measure it today makes the next step in that harmful direction that much more likely — indeed,



In Punjab, free power and low water charges have caused excessive irrigation. Vast tracts, stricken by salination, have become unusable. But if you even propose that the subsidies be cut, your opponents will scream: "anti-farmer, anti-people"

virtually inevitable. That the income of farmers growing tobacco remains high is an important task for the Andhra Pradesh government. Keeping the production of private automobiles high is an even more important task of the Central government.

Moreover, every step, every concession or subsidy foments discourse and politics of a kind that will perpetuate it.

To encourage growth in the North East, the finance minister announces excise concessions for industries that will be set up there. Cigarette companies, firms producing pan masala rush to the region. That is growth!

Power congeals around it. Water charges have been kept disastrously low. In Punjab providing power free has compounded the effects of these. The two subsidies together have caused excessive irrigation. As a result the water table has fallen substantially. And vast tracts, stricken by salination, have become unusable. But if you even propose that the

subsidies be cut, your opponents will scream, "Anti-farmer, anti-people."

No one was surprised, therefore, when in the recent elections both the Akalis and the Congress promised free power. The position in regard to subsidies on chemical fertilizers is the same. A large proportion of these go not to the farmer, but to industrialists. But no government can risk reducing them.

Reuters

because of smoking. Now, that is a big amount. The news is of direct interest to millions in India. Yet, it has scarcely been mentioned by our media and advertising industry — the socially responsible advertising contests notwithstanding — to say nothing of doing what was manifestly required: that is, to burn the figure into the consciousness of every smoker. For exactly the same reasons, one step making the next step in the same direction inevitable, the notion that higher consumption of materials signifies a higher level of development — today expend next to no thought on alternatives.

We spend Rs 80-90,000 crores every year on importing oil. How much do we spend on research that would make solar power affordable? Rs 4.2 crore. How much are we spending on developing better wind turbines? Rs 1.95 crore.

Even technologies that have been known for decades, indeed which have been in actual and fruitful use in other countries for decades continue to be ignored. Brazil meets almost a fifth of its requirements of automobile fuel from ethanol. It has been using this for decades. We are among the largest growers of sugarcane. Yet, we have done nothing to induct it into our petrol stations.

At the Indian Institute of Science, Dr H S Mukanda and his colleagues have produced a substitute for diesel from an oilseed so hardy it grows in waste and arid lands and other bio-residues. The ordinary Kirloskar diesel pump works perfectly on it. While we spend over Rs 9,000 crore every year on subsidising the use of diesel, Dr Mukanda is scarcely able to get a hearing. And the waste and arid lands continue to lie waste.

To induce policy-makers to think anew, ecologists and others should grade policies and policy instruments — the more it propels the country in the same, unthinking direction, the lower should it be graded. And we have ready opportunities at hand. Central and State governments present budgets every year. Grade each. What does it contain that, for instance, will move the country to reduce its dependence on imported oil? What does it contain that discourages production of carcinogenics? Five Year Plans are published: inform the country if the new one is, as the late Raj Krishna would say, really "the Nth Five Year Plan", or just "the Nth edition of the usual plan".

(To be continued)

(Based on Arun Shourie's address at TERI's Summit on Sustainable Development in New Delhi on February 27, 2002)

Corporates need to do more: TERI

Our Bureau

NEW DELHI, 17 FEBRUARY

THE CONSENSUS at the Delhi Summit on Sustainable Development, held last week in New Delhi, organised by the Tata Energy Research Institute (TERI) was that corporate involvement in sustainable development in India had become a reality.

Participants, drawn from all over the world, agreed that most well managed companies should recognise that they do have obligation that goes beyond to their shareholders. The behaviour of Indian consumer is changing fast. They would like the corporate to demonstrate their ethical and moral behaviour in business.

Speakers felt that while there was no single blueprint for the corporate for involving stakeholders, corporate should understand that stakeholders' dialogue is a serious, heavy and long-term commitment of time, money and manpower. Secondly, the process should be open and consistent. Lastly, the results should add value to all stakeholders including business house, local communities and others. Asian Development Bank, Manila, Department for International Development, UK, Gas Authority of India Limited, Ministry of Environment and Forests, etc participated.



EVENTS



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The Sustainable Development Summit 2002 held in Delhi draws the world's attention to poverty alleviation as the means to a sustainable future.

R. RAMACHANDRAN

THE best definition of the phrase 'sustainable development' perhaps is the one arrived at by the Brundtland Commission set up by the United Nations in 1987 as "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs". In 1992, the UN Conference on Environment and Development (UNCED) in Rio de Janeiro, the Earth Summit, called for sustainable development "to ensure socially responsible economic development while protecting the resource base and the environment for the benefit of future generations". Ten years down the line, as the 21st century confronts the world, it is time to take stock of progress in achieving that goal. The U.N. World Summit on Sustainable Development (WSSD), scheduled to take place in Johannesburg between August 26 and September 4, is aimed to do that as well as to evolve workable solutions to move ahead.

BY SPECIAL ARRANGEMENT

Prime Minister Atal Behari Vajpayee releases a booklet, "Defining an Integrated Energy Strategy for India", by presenting a copy to Union Minister for Environment and Forests T.R. Baalu at the inauguration of the Sustainable Development Summit 2002. Also in the picture are Tata Energy Research Institute Director R.K. Pachauri and Dutch Minister for Housing, Spatial Planning and



Environment Jan Pronk, who is also the Chairman of the Seventh Conference of Parties.

What had been initiated at the 1972 Stockholm UN Conference on the Human Environment culminated in Rio with the global realisation that environmental protection and natural resource management must be integrated with socio-economic issues. The Rio Summit was a landmark event that brought together governments including more than 100 heads of state, international agencies and non-governmental organisations (NGOs), where the international community committed itself to secure economic well-being, social development and environmental stability - the three pillars that the world had come to realise need to be concurrently addressed if sustainable development is to be achieved. Ignoring any one of these, negates the achievements with regard to the other two.

The future agenda for sustainable development was clearly defined at the conclusion of the Rio Summit when the assembled leaders signed the Framework Convention on Climate Change (FCCC) and the Convention on



EVENTS

The Sustainable Development Summit 2002 held in Delhi draws the world's attention to poverty alleviation as the means to a sustainable future.

R. RAMACHANDRAN

THE best definition of the phrase 'sustainable development' perhaps is the one arrived at by the Brundtland Commission set up by the United Nations in 1987 as "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs." In 1992, the UN Conference on Environment and Development (UNCED) in Rio de Janeiro, the Earth Summit, called for sustainable development "to ensure socially responsible economic development while protecting the resource base and the environment for the benefit of future generations" Ten years down the line, as the 21st century confronts the world, it is time to take stock of progress in achieving that goal The UN World Summit on Sustainable Development (WSSD), scheduled to take place in Johannesburg between August 26 and September 4, is aimed to do that as well as to evolve workable solutions to move ahead

BY SPECIAL ARRANGEMENT

Prime Minister Atal Behari Vajpayee releases a booklet, "Defining an Integrated Energy Strategy for India", by presenting a copy to Union Minister for Environment and Forests T.R. Baalu at the inauguration of the Sustainable Development Summit 2002. Also in the picture are Tata Energy Research Institute Director R.K. Pachauri and Dutch Minister for Housing, Spatial Planning and Environment Jan Pronk, who is also the Chairman of the Seventh



Conference of Parties.

What had been initiated at the 1972 Stockholm UN Conference on the Human Environment culminated in Rio with the global realisation that environmental protection and natural resource management must be integrated with socio-economic issues The Rio Summit was a landmark event that brought together governments including more than 100 heads of state, international agencies and non-governmental organisations(NGOs), where the international community committed itself to secure economic well-being, social development and environmental stability - the three pillars that the world had come to realise need to be concurrently addressed if sustainable development is to be achieved Ignoring any one of these, negates the achievements with regard to the other two

The future agenda for sustainable development was clearly defined at the conclusion of the Rio Summit when the assembled leaders signed the Framework Convention on Climate Change (FCCC) and the Convention on

Biological Diversity (CBD), endorsed the Rio Declaration on Environment and Development and the Forest Principles, and adopted Agenda 21, a 300-page plan for achieving sustainable development in the 21st century. Agenda-21 constitutes the centrepiece of the Rio Summit.

As a follow-up, the Commission on Sustainable Development (CSD) was created in December 1992 under the UN Economic and Social Council (ECOSOC) in order to ensure the effective implementation - at the local, national, regional and international levels - of what had been agreed upon at UNCED. The five-year review of the progress of the Earth Summit by a special session of the UN General Assembly (UNGA) - called Earth Summit + 5 - held in June 1997 adopted a comprehensive document titled 'Programme for the Further Implementation of Agenda 21' prepared by the CSD. It also adopted the programme of work of the Commission for 1998-2002.

Year 2002, or Rio + 10, is upon us and Agenda 21 is up for its second five-year review. The WSSD, being held under the auspices of the CSD, will be the forum where progress on Agenda-21 will be reviewed and decisions taken with regard to its implementation in the 21st century. WSSD will also evolve measures to implement the developmental goals of the Millennium Declaration adopted at the Millennium Summit held in New York in September 2000, which included the following resolve of the world leaders: "We reaffirm our support for the principles of sustainable development, including those set out in Agenda 21, agreed upon at the UNCED." These Millennium Development Goals (MDG) supplement the objectives set forth in Agenda 21.

Such a reiteration of the Rio objectives has become necessary as, despite the global consensus and political commitment of nation-states to a future of sustainable development, progress towards the established goals has been tardy and in some respects the conditions are worse than they were a decade ago. Indeed, in one of the Millennium Summit preparatory sessions of the General Assembly, UN Secretary-General Kofi Annan expressed surprise at the limited discussions on the subject of sustainable development and remarked that "so little priority is accorded to these extraordinarily serious challenges for all humankind." This reaffirmation notwithstanding, the US rejection of the Kyoto Protocol on climate change was a significant pointer to the growing concern that the developed countries are yet to demonstrate their full commitment to end their unsustainable ways of living.

In his comprehensive report "Implementing Agenda-21" presented at the conclusion of the Second meeting of the Preparatory Committee (PrepCom) for the WSSD held in New York between January 28 and February 8, Kofi Annan identified four broad areas where "gaps in implementation were particularly visible":

- * A fragmented approach towards sustainable development. Policies and programmes at both national and international levels do not reflect the inextricable connections between economic, social and environmental objectives,

- * No discernible changes in the unsustainable consumption and production patterns, which are putting the natural life-support system at peril,

- * Lack of mutually coherent policies or approaches in the areas of finance, trade, investment, technology and sustainable development, particularly in the context of a globalising world,

- * The financial resources required for implementing Agenda-21 have not been forthcoming and mechanisms for transfer of technology have not improved.

In the run-up to the Johannesburg Summit, besides the PrepComs of the CSD (of which two more will be held in March-April and May-June), several national, regional and international conferences are being held to identify the issues that will go to supplement the official WSSD agenda arrived at by the CSD. One such important international meeting was the one organised in New Delhi between February 8 and 11 by the Tata Energy Research Institute (TERI), a research-oriented non-governmental organisation with its headquarters in New Delhi. Called the Delhi Sustainable Development Summit 2002 (DSDS 2002) (the second in TERI's sustainable development summit series), the conference was titled "Ensuring Sustainable Livelihoods: challenges for governments, corporates and civil society at Rio + 10".

THE meeting brought together eminent personalities from India and abroad concerned with issues related to sustainable development, most notably Jan Pronk, the Special Envoy appointed by Kofi Annan to the WSSD. Pronk, currently the Dutch Minister for Housing, Spatial Planning and Environment, is also the Chairman of the Seventh Conference of the Parties (COP) to the Kyoto Protocol scheduled for November 2002 and the prime force behind the Protocol's final text and its adoption. It is learnt that one of the prime objectives of Pronk's visit to India was to extend a personal invitation to Prime Minister Atal Behari Vajpayee to attend the Johannesburg Summit. "If the Summit is to be called a Summit, heads of state and heads of governments must make every effort to participate and for the summit to be a global summit, no country should be absent so that a globally agreeable agenda must be negotiated," Pronk remarked in his statement read out at the inaugural of the conference as commitments back home prevented him from reaching the meet in time.

Pronk wished to emphasise the fact that, though Johannesburg is the follow-up to Rio, it is not a conference on environment, but on sustainable development, including economics, social affairs and the environment. "Too few people realise that even today," he said. "In Johannesburg, apart from focussing on what went well and what went wrong, we will have to decide on those aspects of Rio that have been forgotten and simultaneously there is a need to look forward. There are trends that were not prominent ten years ago that need to be included today - the impact of globalisation, new technologies in biotechnology and information and communication, new violence such as new types of wars and terrorism," he added. "Rather than issuing a list of recommendations, Johannesburg must reach concrete decisions," Pronk stressed.

Pronk emphasised the fact that the question of access to technology needed to be addressed more pointedly. In fact, at the press briefing, Pronk lamented the fact that this aspect did not receive sufficient attention even at the Delhi Summit. "In the past, we paid lip service to this promise, but the finance was always lacking. We need agreement on finance for technology access as well as agreements on more lenient regulations in order to facilitate access to poor countries," Pronk observed.

The summit background report circulated by TERI reflected the fact that, in the lead-up to the WSSD, the UN and other international development agencies shifted their focus to targeting poverty alleviation as the overriding concern to achieve sustainable development. The path followed until now by governments and international institutions, giving priority to economic growth, has given way to a realisation that this does not necessarily bring about sustainable development, the alleviation of poverty in particular. Every PrepCom meeting has voiced the concern that the core developmental issues of eradicating poverty and meeting basic human needs remain the prime challenge in the developing countries and unless the needs of the weakest are put first, all efforts to preserve the environment or promote sustainable development would prove self-defeating.

The TERI background report quoted the observation by the World Commission on Environment and Development (WCED) "A world in which poverty and inequity are endemic will always be prone to ecological and other crises " According to it, 20 per cent of global population, living in high-income countries, accounted for as much as 86 per cent of the total private consumption expenditure, and the share of the poorest 20 per cent was only 1.3 per cent. The report said that there was a decline in overall poverty rate in the developing countries, from 29 per cent in 1990 to 23 per cent in 1998 (based on poverty line of \$1 per day) and the absolute number of poor declined from 1.3 billion to 1.2 billion. While much of this improvement was concentrated in East and Southeast Asia, with some progress in South Asia and Latin America, there was no progress in sub-Saharan Africa where almost half the population lived in poverty.

"Poverty alleviation measures," the report said, "have traditionally focussed on enhancing per capita income and consumption at the national level, as also manipulating sectoral policies to direct subsidies to the poor. These approaches did not pay adequate heed to the milieu, within which the poor exist and resources they use for generating a livelihood. Poverty eradication in the long run requires the poor to sustain enhanced standards of living through promotion of opportunity, empowerment and security, which in essence lays the foundation of the sustainable livelihood approach. Sustainable livelihood opportunities are shaped not only by local or endogenous factors but also seemingly exogenous factors such as economic and social integration of the nations of the world." The report called for reinvigorating the promises made at Rio regarding resources, technology, capacity-building and market access.

CRITICISING the developed world for not fulfilling the "lesser obligation" of just one-third of the financial resources required to implement Agenda-21, Prime Minister Vajpayee in his inaugural address said "Clearly, they must give more resources, directly through higher aid and indirectly by opening their markets to poorer nations. Therefore, imposing environmental or labour restrictions on free movement of goods and services, in the name of selective aspects of sustainable development, will only intensify poverty in the developing world."

Vajpayee made some proposals for raising resources by using the instruments of sustainable development and globalisation innovatively. He proposed special multilateral levies on global natural resources used by rich countries such as the electromagnetic spectrum or marine fisheries. He also suggested a levy on capital transactions across industrialised countries and capital repatriations from developing countries for several specific poverty alleviation initiatives. "We need to make both sustainable development and globalisation work for the poor. We cannot make the poor and the deprived wait any longer in their aspiration to live a better life. This is the first and foremost task in sustainable development," the Prime Minister added. He urged the summit to present the issues on the agenda for Johannesburg in as clear and unambiguous terms as possible.

The summit was to result in a 'Delhi Declaration' and a report on the conference was to be presented to the CSD for consideration at Johannesburg. For some unstated reason, the much-touted declaration has not been issued yet and the report is yet to be finalised.

The summit's deliberations were organised into 10 thematic sessions. For the poor, the session on ensuring sustainable livelihoods observed, globalisation was both an opportunity and a threat. On the upside, globalisation could make economic activities and institutions more efficient, develop human capital, enhance employment opportunities, provide access to cleaner and more efficient technologies, promote environmental awareness and create

market self-regulation of industrial activities. On the down side, the exacerbation of inequities in the distribution of benefits among world's population had been an impediment to sustainable livelihoods.

The session also expressed concern on the rapid changes in lifestyles and cultural upheaval that it has led to in developing countries. The developed countries, on the other hand, had selectively tapped trained human resources from the developing countries, noticeably in the fields of health, education and information technology, often resulting in exploitation of assets with no returns to the source countries. While Agenda-21 had underscored the importance of such issues, and they had been reiterated at various forums, they were yet to find effective expression in national strategies for development or in bilateral and multilateral commitments.

Rio had held out the promise of 'new and additional' financial resources for sustainable development; to the tune of \$600 billion to implement Agenda 21. On the contrary, the session on financing noted, Official Development Assistance (ODA) flows had declined significantly over the past 10 years. Domestic and foreign private capital had proved inadequate in engendering sustainable development. Further, domestic action towards correcting market and policy failures and making more efficient use of available resources left much to be desired.

The meeting called for not only an increase in the quantum of financial resources - ODA, FDI and domestic - but also more effective use of available resources. It also called for major increases in the funding levels for the Global Environmental Facility (GEF). The session observed that financing a larger number of smaller projects may be more successful than a few large projects in using available resources to ameliorate poverty. The International Conference on Financing and Development to be held in March in Monterrey, Mexico, is expected to discuss ways and means to promote coherence and consistency in the global financing system.

The session underscored the need to restructure financial services to serve the poor better. Citing the example of the Grameen Bank in Bangladesh, it said that monetary systems needed to design special instruments to attract microsavings of the poor into the corporate sector, particularly where these can be structured to serve the poor. The session noted that the Clean Development Mechanism (CDM) introduced under the Kyoto Protocol offered opportunities to tap private capital for sustainable development activities while at the same time providing access to technology to developing countries and enabling industrialised countries to meet their commitments to reduce green house gas emissions flexibly and effectively.

"Since everyone is a potential stakeholder, the Johannesburg Summit will need to strengthen the mechanism for involving all stakeholders, especially the vulnerable groups, in decision making. At the discussion on 'engaging stakeholders', it was observed that the business community should be recognised as an important stakeholder in the pursuit of sustainable development.

The Delhi Summit has come out with a list of recommendations that will presumably form part of the report to be submitted to the WSSD. If there is one common thread that runs through the rich fabric of the proceedings, it is the resolve to go beyond deliberations and focus on determined action.

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Danish minister regrets dumping of plastic waste

SONU JAIN

NEW DELHI, FEBRUARY 12

DENMARK'S Environment Minister Hans C Schmidt was profusely apologetic about the fact that his country had been sending plastic waste to India for re-cycling illegally. "This would be the last time something like this has happened," he said.

Ironically he is here to participate in the Delhi Sustainable Development Seminar organised by TERI. Plastic is seen as one of the most unsustainable products as it is non-biodegradable.

Recently a coalition of voluntary associations called NoPE (No Plastics in the Environment) had brought this fact to light and had met the Danish Deputy Head of Mission in New Delhi to apprise him of the situation as Denmark is also known for its commitment to environmental causes.

The last consignment from Denmark was of 400 tonnes. "This is the first case that has been brought to our notice but we believe that this illegal practice has been on," said Schmidt speaking to *The Indian Express*. Though the consignment from Denmark is not the cancer-causing PVC but acrylic polymers, it is seen as "plasticisation" of India when the country has more plastic it can deal with.

"As soon as it was brought to light, I contacted the firm through the municipality of the area and it seems that they did not know the rules," said Schmidt. Since Denmark is a signatory to the Basel convention, it cannot send haz-

ardous waste to other countries without their permission.

The other guilty countries are Canada, Germany, the UK, the Netherlands, Japan, France and the US. More than 61,000 tonnes of plastic waste has already found way to the country in 1999-2000 as compared to 59,000 tonnes the year before.

On the one hand when Indian cities are grappling with mounds of plastic waste, data from the office of the Foreign Trade has shown that India has been a favoured ground for dumping plastic waste.

As India has no law banning import of plastic and

ECO

VIGIL

mal sector, countries with stricter environmental laws find it convenient to send it

here. Recycling in India is mainly an informal industry and contrary to belief is not environment-friendly.

"Most plastics can only be downcycled into lower quality products that often have higher and more leachable levels of toxic additives," said Bharati Chaturvedi of NoPE. "What we are demanding is a complete ban on imports of plastics and after the ban there will be a ban by local people."

The Ministry of Environment and Forests has already made efforts to ban plastic bags by issuing notifications. The ban has been set up under Justice Ranganath Mishra to suggest ways to deal with plastic waste. The committee is to give its report at the end of this month.

Israeli minister backs India on terrorism

IAN S

New Delhi

A SENIOR Israeli minister on Monday backed India against what he called attempts by Pakistan to impose a solution to the Kashmir dispute through terrorism, saying New Delhi should defeat these moves.

"The situation in Jammu and Kashmir has been transparent for many years and we understand and support India's actions to prevail over attempts to impose a solution through terrorism and violence," Environment Minister Tzachi Hanegbi said.

Hanegbi, commenting on the current tension between India and Pakistan that has seen the South Asian neighbours mobilising troops along their border, told journalists that Israel faced a similar situation with regard to Palestine.

"Like you, we believe in finding a solution through dialogue and a genuine agreement, but we realise that when a democratic country is not facing another democratic country there is such a gap," he said.

Hanegbi, who arrived here on February 7 on a five-day visit to India, primarily to take part in the Delhi Sustainable Development Summit organised by the Tata Energy Research Institute, said

Israel and India were close to signing a cooperation in

"In environment we face the same problems despite the difference of size. We can share our experience for mutual benefit," he said.

His visit also marked a decade of diplomatic relations between the two countries, Israeli Ambassador to India, David Aphek said.

Foreign Minister Shimon Peres had visited India in early January as part of a decision by the two

countries to enhance cooperation in various fields to celebrate the establishment of diplomatic ties.

Hanegbi, a close associate of Prime Minister Ariel Sharon and a leading member of his Likud Party, denied suggestions that Sharon's strong-arm tactics against Palestinians had led to the escalation of violence.

"The government has not taken harsh measures. In fact Sharon has shown amazing restraint in the face of grave provocation," he said, adding during the last few months Israel had buried 265 citizens, mostly civilians, including women and children.

"They were killed because they were Jews," but still there was an ongoing dialogue in the government on the need for a negotiated settlement to the Palestinian issue. "Our actions have been defensive rather than offensive in nature," he added.

"We still hope, I don't know how realistic it is, there will be more international pressure on Palestine by the Americans, Europe and friendly Arab countries to put an end to violence and return to the negotiating table. Otherwise, we are doomed," he said.

But Hanegbi said Palestinian President Yasser Arafat had "made himself irrelevant" because of his failure to stop violence against Israel. Following the assassination

of Rehavam Ze'evi, the Government had decided not to have any further negotiations with Arafat, he said.

"We have given him, names and addresses of about 100 people responsible for not only the killing of several innocent people but also for continuing to plant bombs. It is my hope that the Palestinian people will be able to develop a pragmatic leadership," he said and added the Govt had already initiated talks with three other Palestinian leaders.

Green activism: A case of West doublespeak?

Yoga Rangata

New Delhi

WHEN THE world meets at Johannesburg later this year to take stock of green agenda that world leaders agreed to a decade ago, Indian Government's one-point agenda would be to push for more aid from developing countries. But the richer countries seem weary of direct aid to developing countries. They would rather pass on indirect benefits like, say, greater market access to developing countries.

At the UN Conference on Environment and Development at Rio de Janeiro in 1992, richer nations had pledged 0.7 per cent of their GDP as assistance to developing countries. But most of them have fallen short of these pledges. Even as the world leaders meet again later this year to take stock of post-Rio development, countries like India would like to push

for renewed pledge on greater aid to developing countries.

"Was India's optimism misplaced about aid from developing countries," Union Minister for Environment and Forests T R Baalu asked.

A group of environment ministers from several EU countries who met here at Delhi Sustainable Development Summit fought shy of any such commitments on meeting

these levels of official development assistance (ODA) or going beyond these. Mr Simon Upton, former environment minister of Finland and currently chairman of OECD Round Table on Sustainable Development, pointed out that subsidies doled out by countries of Organisation of Economic Cooperation and Development (OECD) are ten times more than the pledged assistance. Subsidies on agriculture alone is seven times of ODA. "There would

be substantial gains to developing countries even by quicker liberalisation of trade and lifting immigration restriction," he argued. Trade restrictions are dwarfing ODA, he added.

India's other concern is technology transfer of environmental-sustainable technologies from the West. But Governments of the industrialised countries plead helplessness in facilitating this because much of the technology lies with the private sector, which cannot be mandated to part with technology cheaply to poorer countries.

India's implementation of Montreal Protocol on curbing ozone depleting substances has shown that domestic industry has been refused technologies that can manufacture substitutes to ozone-harming substances. The Indian market is flooded with imported products.

Jan Pronk, environment minister

of Netherlands and adviser to the UN secretary-general admits that the world "does not know how to deal with the technology transfer issue because of the legal constraints involved." A way to get around the problem would be making financed available to developing countries to buy such technologies.

But the issue of financing for development has eluded the world so far. There were proposals to impose carbon tax, transaction tax and capital tax, even by a UN panel represented from India by Dr Manmohan Singh, but neither international political opinion nor businesses seem to favour these proposals. Talking about domestic environmental measures, Union Disinvestment Minister Arun Shourie said that non-governmental agencies should come forward with eco-rating of official documents and even the Union Budget. He favoured use of economic instruments for pricing of products and services.

WESTERN NATIONS FAIL TO HONOUR 'AID' PLEDGE

Summit on sustainable development sets up a do-able agenda

Rajiv Tikoo
New Delhi, Feb 11

ACTION seems to be the operative word. The Delhi Sustainable Development Summit 2002 (DSDS 2002), which concluded on Monday, not only laid stress on more concrete endeavours for sustainable development, but also threw up for discussion some measures that would help translate proposals into actions.

The measures included setting up a do-able agenda, exploring parallel delivery mechanisms, commitment of resources, and firming up of political will across the world. It's essentially the environmental governance that needs

to be strengthened, emphasised Dr Maritta R von Bieberstein Koch-Wesser, president of Earth 3000, a Germany-based environmental nonprofit.

Organised by Tata Energy Research Institute (Teri) in partnership with the ministry of environment and forests, DFID, and the Netherlands embassy, the three-day long summit was inaugurated by Prime Minister Atal Bihari Vajpayee on February 8. Global and national political leaders, senior Indian government officials, corporate leaders, NGOs, research organisations and academic institutions from all over the world participated in it.

Indian businesses were not sufficiently represented though,

pointed out Bjorn Stigson, president of the World Business Council for Sustainable Development.

Focussing on *Ensuring Sustainable Livelihoods: Challenges for Governments, Corporates, and Civil Society at Rio+10*, the summit not only took stock of the progress made since the 1992 Earth Summit in Rio de Janeiro Rio, but also pinpointed the gaps that had slowed down that progress. While admitting that Rio did not quite live up to the expectations, Ian Johnson, vice-president of Environmentally & Socially Sustainable Development with the World Bank, stressed that the Rio summit did focus the world attention on sustainable development as never before.

The Rio summit had underlined the need to integrate economic growth, social justice and environmental concerns in a sustainable manner by adopting Agenda 21. Integrating environmental, economic and social concerns into a single policy framework, Agenda 21 comprises over 2,500 recommendations for action, including detailed proposals on how to reduce wasteful consumption, tackle poverty, protect the atmosphere, oceans and biodiversity, and promote sustainable agriculture.

Setting the theme for DSDS 2002 in keeping with the forthcoming United Nations World Summit on Sustainable Development to be held in Johannesburg,

which will be the decadal follow up of the Rio summit, was only logical, said Dr R K Pachauri, director-general, Teri. DSDS 2002 was very timely and opportune, agreed Nitin Desai, under-secretary-general of the Department of Economic and Social Affairs with the United Nations.

Teri will be thrashing the inputs from the summit in the form of Delhi Declaration for submitting it formally at the Johannesburg summit. Considering that the declaration will be the outcome of the deliberations between the world opinion leaders on social and environmental sustainability, some of whom will also be participating at the Johannesburg summit, it's

expected to come up for discussion there.

The hope is that the brainstorming at DSDS 2002 will positively influence the agenda at the Johannesburg summit, said Dr Pachauri. Nevertheless the declaration will have to compete with representations from other countries and conferences. If the declaration is important, it will be difficult to disregard it, pointed out Dr Jan P Pronk, special envoy for the United Nations secretary-general to the Johannesburg summit.

DSDS meet assumes significance particularly since this is one of the few important events in the developing world in the run up to the Johannesburg summit. ♦

'Govt. plans to increase power generation'

By Our Special Correspondent

NEW DELHI, FEB. 10. The Union Power Minister, Suresh Prabhu, said today that the Government was targeting a whopping increase in power generations from cleaner renewable energy resources and expected the Johannesburg Summit to help it.

Addressing the delegates attending the Delhi Sustainable Development Summit 2002, Mr Prabhu said the Government intended to raise the power generation from the renewables from the existing two per cent to 20 per cent and from 10 per cent to 20 per cent from nuclear

sources. The dependence on hydro sources would then be reduced to a comfortable 50 per cent.

Lauding the TERI for providing valuable inputs in renewable energy technology and raising the right issues, he said India would like the Johannesburg Summit to help it in the task of increasing power generation from cleaner sources and using requisite technology for providing electricity to remote parts of the country.

Underlining the importance of the power sector, Mr Prabhu said "without electricity, livelihoods cannot be environmen-

tally sound. If livelihoods of people are not sustainable, one cannot expect peace and harmony in the world".

Earlier chairing the session at the summit titled "Ensuring sustainable livelihoods, Challenges for Government, Corporates and Civil Society at Rio+10", Ambassador Arne Walther, Ministry of Foreign Affairs, Norway, disapproved the developed countries policy of excessive energy consumption.

"Rich countries must use energy efficiently, keeping the needs of the poor nations in mind," he said.

Fuel cells may solve all our energy problems soon

New Delhi, Feb 10



SCIENTISTS in the US have developed a new technology to generate energy which could be used for lighting up villages, besides being used for cars and cell phone batteries

"The new technology, called fuel cell technology, can be used for off-grid power generation and we are trying to see its market potential in India in this context," Dr Thomas M Connelly, global chief science and technology officer of DuPont, the company which has developed the technology, told PTI. "We had talks with Tata Energy Research Institute (Teri). However, nothing has been decided as of now," he said. Fuel cell technology could also be used for running cars and cell phones. However, for using it in cell phones, scientists are working to produce micro fuel cells

Micro fuel cells, for example of 2.5 kilo watt per hour capacity, might act as portable energy

source and could be used to even light up a room, he said. When used in cell phones, fuel cells would allow users to avoid the need to charge the battery every day

Stating that fuel cell technology was a clean one as no direct burning of fuel takes place, Dr Connelly said fuel was separated from oxygen by a membrane and energy was generated through a circuit using electrodes. At the moment fuels like hydrogen, methanol, natural gas and propane are being explored as the fuel, he said. The company had patented the membrane, called Nafion, used in the fuel cells

For various uses like in cars or cell phones, the technology needed modification which would be done after assessing the market opportunities, Dr Connelly said.

The company was also working on another technology called light emitter displays, which was likely to be launched by 2003. It would have uses in display of cell phones and computers, he said. India was an important market for the company and its business in India was growing by 15-20 per cent per year, Dr Con-

nelly said adding "we want to sustain this growth and further increase it"

The country was of particular importance in terms of nutrition and health products, plant protecting chemicals and seeds. Last year the company had introduced a pesticide called 'Avaunte' which is used to protect cotton crop against some pests. The product was specially developed keeping in mind the Indian conditions as India was one of the major cotton producers, he said. Besides, company's many plant protection products targeted for wheat, rice and cotton were undergoing field trials in India.

Stating that biotechnology was of immense use for meeting the problem of malnutrition in countries like India as it could increase the amount of food and of nutrients like protein and oil, he said the company had isolated a protein from soybean and was currently assessing possibilities of its use in India

"It can either be added to the flour at milling level or at housewife level. Talks were on with companies like Hindustan Lever and Pilsberry, which are into flour producing," he said. PTI

Scientists develop fuel cell technology

NEW DELHI, FEB.10 Scientists in the U S have developed a new technology to generate energy which may be of use in lighting up villages, besides using it for cars and cell phone batteries

"The new technology called fuel cell technology can be used for off-grid power generation and we are trying to see its market potential in India in this context," Thomas M. Connelly, Global Chief Science and Technology Officer of Dupont, the company that had developed the technology said

"We had talks with the Tata Energy Research Institute. However, nothing has been decided as of now," he said

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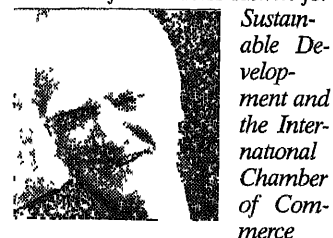
When used in cell phones, fuel cells would allow users to avoid the need to charge the battery every day. _ PTI

'Corporate sustainability will aid the cause'

The second day of the Delhi Development Summit focussed on the private sector and what its role would be in defining changes. They were seen as important stake-holders in ensuring sustainable development and livelihood in the context of globalisation. Earlier, government was seen as the only solution-provider.

There were representatives from multinationals like DuPont and Shell who laid down their roadmaps for the Johannesburg summit in August. Encouraged by success stories from around the world, their goal is to make Corporate Social Development an integral part of every corporate's agenda.

Mark Moody-Stuart is presently chairman for Business Action for



He brings with him the experience of being former chairman of UK-based Shell, a company whose image change has become legendary. He spoke to Sonu Jain about his experience in Shell and his expectations from Johannesburg.

■ From being a company which dealt in a process that was seen as damaging to the environment, the company now has an eco-friendly image. What was this experience like for you?

We addressed the areas where things went wrong. We went out,

engaged in consultation and made some revisions in principle in relation to human rights and sustainable development. The biggest step we took was to make our working completely transparent. It was not an easy thing to do but we rebuilt trust which people had lost in big businesses as a whole. We went to the extent of putting up campaigns against us on our website.

■ How do you see your new role?

My job is to unite industry together to address issues of sustainability. We are in the process of defining our agenda through preparatory meetings with stakeholders. There are many examples where corporates have been able to successfully achieve their objec-



tives in sustainable development while meeting their economic objectives. In every example, what is common is the partnership with others be it with civil society, NGOs or the local government.

■ What are your expectations from Johannesburg?

'People can offer a tiny amount for the environment'

Dr Maritta R. von Bieberstein Koch-Weser has spent the past 20



years crusading for a cleaner and safer world. She has worked with the World Bank and International Union for Conservation of Nature (IUCN). Now she heads Earth 3000, a non-profit organisation defending environmental rights based in Germany.

In Delhi, to attend the summit, she speaks to Sangeet Kumar on funding environment protection.

■ Could you elaborate on a mechanism that you think can be one way of financing the environment movement?

I think the numerous electronic transactions conducted daily in the world is a large untapped area and provide immense scope. What I envisage is a totally voluntary system where people can offer to have a tiny amount deducted in every transaction. The periodicity and the amounts can be determined by the donor. It can be an extra dollar each time one flies or regular 'painless' contributions. We also have to ensure that contributors get to know how their money is being used.

■ Why do you think have the

We have to get businesses on board. We are also working to ensure that the field can interact with participants of the summit, ask questions and have their issues addressed at that point. This will show that it is not just talk by the government but actually some work is being done.

■ Are there any examples which you are going to showcase at Johannesburg?

Sustainable fishing is one such big example. This is where consumers and retail outlets have said that they will not buy fish unless it is caught in a sustainable way.

There are numerous examples in mining where locals have been involved in the process and have

participated.

We are also running a project on biodiversity where four-five energy giants are coming together with NGOs like International Union for Conservation of Nature to protect certain eco-sensitive areas. Kenya has energy efficient stoves which have been very successful. They still use wood but at least the consumption has been reduced to a large extent.

■ How does corporate sustainability help?

It just means that we are seen as useful members of the society, we get good people to work with us and people buy our products. The economics, the sustainability and the product — all these have to be addressed in equal measure.

goals charted out at the Rio summit 10 years ago not been realised?

An important reason is the existence of weak institutions that have little money and political power. In spite of the fact that Agenda 21 was very good it couldn't be implemented because there was no enforcing authority.

■ What can be done at Johannesburg to give a thrust to the movement for a safer Earth?

We need to think about a world environmental organisation which is strong politically and financially. The body has to make it its responsibility to enforce environmental standards and regula-

tions in member countries. We also need to give serious thought to where and how the money is going to come from.

■ What do you think are the biggest and most immediate challenges facing our planet?

The first biggest challenge is protecting biodiversity. This is something you will not get back once you have lost it. The second area that needs attention is climate change and the Kyoto Protocol becomes important in this context. The third thing which urgently needs our attention are the oceans. They form two-thirds of the planet and they are our richest source of protein.

'We are in the middle of the sixth mass extinction'

'If you buy paper, you should pay for that tree's role in biodiversity'



Prof Charles Perrings Pay the price for what you consume
SANGEET KUMAR
NEW DELHI, FEBRUARY 9

AS the Head of Department, Environment Department at the University of York, England, Charles Perrings is first of all an academic. He advocates tough measures for preserving biodiversity. It is, therefore, no surprise that he is the president-elect of the International Society for Ecological Economics. Perrings, who is in the Capital to attend the Delhi Sustainable De-

velopment Summit, advocates putting the right price on each commodity which reflect not only the economic cost but also the ecological cost.

■ How real is the threat to the biodiversity on our planet?

Scientists say that we are in the middle of the sixth mass extinction. One of these mass extinctions led to the decimation of dinosaurs and other species. It is this prediction by the scientists that led to the Rio conference 10 years ago. After Rio the efforts to preserve species and bio diversity has gained ground.

■ On what evidence is the theory of mass extinction based?

There is evidence that hundreds of thousands of species have finished. This information though is not complete because there is no account of the total number of species in the world. If you don't know what you have, you don't know what you've lost. One example is the war against smallpox. It took scientists years to determine for sure that the smallpox virus had ceased to exist. The only way to determine the level of extinction of species is to correlate the extinction of habitat with the extinction of species.

We know that a certain number of species live in a given area of habitat so if that habitat is

wiped out so are that number of species.

■ Is there a mechanism to preserve the diversity of natural species?

We have to get the pricing structure right. Preserving biodiversity is mostly a local activity but has global benefits. We have to provide incentives to the poor if we want them to preserve their natural surroundings. We have to ensure there are adequate investments in preserving biodiversity and the investments have to come from all those who stand to benefit

from its preservation. And the approach has to focus on building many small areas of preservation around the world instead of having a few large areas.

■ Some say that the West has no right to tell lesser developed countries to preserve their forests. Do you think this is justified?

I agree that the developed world has used up most of its forests and other natural resources but they have also replanted many forests. If the northern hemisphere is not ready to pay for preserving forests in the south then it is defi-

nately wrong and unjustified. There is a way for finding out the costs involved in using up natural resources and those costs should be imposed on those who use the commodities. So if you buy paper you have to pay for the cost that the felling of a tree would have on the carbon balance. You also have to pay for the role that the tree may have played in the hydrological balance.

■ Is there a scientific way of quantifying these costs?

Economists have devised several ways to determine ecological

costs. One way to determine these costs is do a market research over a wide variety of sample, a method widely used in settling legal claims. In the survey we ask the people what they would pay for say protecting a watershed. Then we take an average of all the responses to determine the value of the resource.

The second method is to use the market to determine the cost of non-marketed resources. This is a slightly more complex method and uses comparisons between similar resources to determine the costs.

'Johannesburg meet should discuss education'

EXPRESS NEWS SERVICE
NEW DELHI, FEBRUARY 9

THE issue which dominated most of the discussions in a seminar on Sustainable Development was the need to address the issue of education in the coming summit in Johannesburg.

The seminar, organised in the Capital by TERI, is the first exercise to prepare a set of recommendations to be submitted for the UN summit in Johannesburg in August.

"Talk about education is everywhere but it (education) is



nowhere," said Hans J A van Ginkel, Rector, United Nations University, Japan. "If there can be nine stake-holders why not 10?" he asked making a case for calling

university and primary school teachers to be part of the entire process of charting a road-map for development.

Delegates from 40 countries were of the view that with this, there would be a complete synergy between the micro and the macro. A forum can be provided but it is the local institutions such as primary schools which will actually suggest ways to implement it.

Secretary for Environment and Forests P V Jaisankar pointed out that some of the schemes like mid-day meals are already a success in some parts of

the country.

A need to improve the curriculum was felt so as to empower future generations. Though van Ginkel said he was not in favour of having a common curriculum for the entire world, he added, "Education should reflect society and where it takes place."

I C Jain, chairman, Industrial Development Society also pointed out the need for improving education. "If you want to help somebody forever, educate him," he said. The need was felt not just for formal education but a non-formal one too.

Recasting an economy ...

Continued from page 1

A monumental undertaking Learning from China



In an eco-economy, mature industrial economies with stable populations can operate largely by recycling the materials already in use.

working with a consortium of corporations led by Shell and Daimler Chrysler, plans to be the world's first hydrogen-powered economy.

So we can see pieces of the eco-economy emerging, but systemic change requires a fundamental shift in market signals, signals that respect the principles of ecological sustainability.

Unless we are prepared to shift from income to environmen-

tally destructive activities, such as carbon emissions and the wasteful use of water, we will not succeed in building an eco-economy.

Restoring the balances of nature is a huge undertaking. For energy, it depends on shifting from a carbon-based economy to a hydrogen-based one. Even the most progressive oil companies, such as BP and Royal Dutch Shell, that are talking extensively about building a solar/hydrogen energy economy are still investing overwhelmingly in oil, with funds going into climate-benign sources accounting for a minute share of their investment.

Reducing soil erosion to the level of new soil formation will require changes in farming practices. In some situations, it will mean shifting from intense tillage to minimum tillage or no tillage. Agro-forestry will loom large in an eco-economy.

Restoring forests that recycle rainfall inland and control flooding is itself a huge undertaking. It means reversing decades of tree cutting and land clearing with forest restoration, an activity that will require millions of people planting billions of trees.

Building an eco-economy will affect every facet of our lives. It will alter how we light our homes, what we eat, where we live, how we use our leisure time, and how many children we have. It will give us a world where we are a part of nature, instead of estranged from it.

multiplying it by four.

Interestingly, the adoption of the western economic model for China is being challenged from within. A group of prominent scientists, including many in the Chinese Academy of Sciences, wrote a white paper questioning the government's decision to develop an automobile-centered transportation system.

They pointed out that China does not have enough land both to feed its people and to provide the roads, highways, and parking lots needed to accommodate the automobile. They also noted the heavy dependence on imported oil that would be required and the potential air pollution and traffic congestion that

would result if they followed the U.S. path.

If the fossil-fuel-based, automobile-centered, throwaway economy will not work for China, then it will not work for India with its 1 billion people, or for the other 2 billion people in the developing world. In a world with a shared ecosystem and an increasingly integrated global economy, it will ultimately not work for the industrial economies either.

China is showing that the world cannot remain for long on the current economic path. It is underlining the urgency of restructuring the global economy, of building a new economy — an economy designed for the earth.

History's greatest ...

transmission lines that connect wind farms with electricity consumers, and the pipelines that link hydrogen supply sources with end-users. To a substantial degree, the infrastructure for the existing energy economy — the transmission lines for electricity and the pipelines for natural gas — can be used in the new energy economy as well. The local pipeline distribution network in various cities for natural gas can easily be converted to hydrogen. For developing countries, the new energy sources promise to reduce dependence on imported oil, freeing up capital for investment in domestic energy sources. Although few countries have their own oil fields, all have wind and solar energy. In terms of economic expansion and job generation, these new energy technologies are a godsend.

There are also abundant investment opportunities in the food economy. It is likely that the world demand for seafood, for example, will increase at least by half over the next 50 years, and perhaps much more. If so, fish farming output — now 31 million tons a year — will roughly need to triple, as will investments in fish farming. Although aquaculture's growth is likely to slow from the 11 per cent a year of the last decade, it is nonetheless likely to be robust, presenting a promising opportunity for future investment.

★ ★ ★

In this new economy, some companies will be winners and some will be losers. Those who anticipate the emerging eco-economy and plan for it will be the winners. Those who cling to the past risk becoming part of it.

- 2 Cricket's nursery
- 3 Gazing into the future
- 4 Kolkata's music festival

THE HINDU Magazine

- 5 Browser's nook
- 6 Bridge, Crossword
- 8 Cuisine corner

Recasting an economy for the earth

A monumental undertaking

CONVERTING our economy into an eco-economy is a monumental undertaking. There is no precedent for transforming an economy shaped largely by market forces into one shaped by the principles of ecology.

The scale of projected economic growth outlines the dimensions of the challenge. The growth in world output of goods and services from \$6 trillion in 1950 to \$43 trillion in 2000 has caused environmental devastation on a scale that we could not easily have imagined a half-century ago. If the world economy continued to expand at 3 per cent annually, the output of goods and services would increase fourfold over the next half-century, reaching \$172 trillion.

Building an eco-economy in the time available requires rapid systemic change. We will not succeed with a project here and a project there. We are winning occasional battles now, but we are losing the war because we do not have a strategy for the systemic economic change that will put the world on a development path that is environmentally sustainable.

Although the concept of environmentally sustainable development evolved a quarter-century ago, not one country has a strategy to build an eco-economy — to restore carbon balances, to stabilize population and water tables, and to conserve its forests, soils, and diversity of plant and animal life. We can find individual countries that

are succeeding with one or more elements of the restructuring, but not one that is progressing satisfactorily on all fronts.

Nevertheless, glimpses of the eco-economy are clearly visible in some countries. For example, 31 countries in Europe, plus Japan, have stabilized their population size, satisfying one of the most basic conditions of an eco-economy. Europe has stabilized its population within its food-producing capacity, leaving it with an exportable surplus of grain to help fill the deficits in developing countries.

Furthermore, China — the world's most populous country — now has lower fertility than the United States and is moving toward population stability.

Among countries, Denmark is the eco-economy leader. It has stabilised its population, banned the construction of coal-fired power plants, banned the use of nonrefillable beverage containers,

and is now getting 15 per cent of its electricity from wind. In addition, it has restructured its urban transport network, now 32 per cent of all trips in Copenhagen are on bicycle. Denmark is still not close to balancing carbon emissions and fixation, but it is moving in that direction.

Other countries have also achieved specific goals. A reforestation program in South Korea, begun more than a generation ago, has blanketed the country's hills and mountains with trees. Costa Rica has a plan to shift entirely to renewable energy by 2025. Iceland,

Continued on page 7

Treating the environment as part of the economy has produced an economy that is destroying its natural support systems. But in Eco-Economy, LESTER R. BROWN is optimistic as he describes how to rework the existing structure to make it compatible with the earth's ecosystem. Here, wind farms replace coal mines, hydrogen powered fuel cells become the new engines and cities are designed for people, not cars. Exclusive extracts from the book that is being released today at the Delhi Sustainable Development Summit 2002.



Restructure or decline ... A fossil fuel-based, automobile centered and throwaway economic model will not work for the world

Learning from China

THE flow of startling information from China helps us understand why our economy cannot take us where we want to go. Not only is China the world's most populous country, with nearly 1.3 billion people, but since 1980 it has been the world's fastest-growing economy — expanding more than fourfold. In effect, China is telescoping history, demonstrating what happens when large numbers of poor people rapidly become more affluent.

As incomes have climbed in China, so has consumption. The Chinese have already caught up with Americans in pork consumption per person and they are now concentrating their energies on increasing beef production. Raising per capita beef consumption in China to that of the average Amer-

ican would take 49 million additional tons of beef. If all this were to come from putting cattle in feedlots, American-style, it would require 343 million tons of grain a year, an amount equal to the entire U.S. grain harvest.

In 1994, the Chinese government decided that the country would develop an automobile-centered transportation system and that the automobile industry would be one of the engines of future economic growth. Beijing invited major automobile manufacturers, such as Volkswagen, General Motors, and Toyota, to invest in China. But if Beijing's goal of an auto-centered transportation system were to materialize and the Chinese were to have one or two cars in every garage and were to consume oil at the U.S. rate, China would need over 80 mil-

lion barrels of oil a day — slightly more than the 74 million barrels per day world now produces. To provide the required roads and parking lots, it would also need to pave some 16 million hectares of land, an area equal of half the size of the 31 million hectares of land currently used to produce the country's 132-million-ton annual harvest of rice, its leading food staple.

Although it has almost exactly the same amount of land as the United States, most of China's 1.3 billion people live in a 1,500-kilometer strip on the eastern and southern coasts. Reaching the equivalent population density in the United States would require squeezing the entire U.S. population into the area east of the Mississippi and then

Continued on page 7



History's greatest investment opportunity

RESTRUCTURING the global economy so that economic progress can be sustained represents the greatest investment opportunity in history. As noted in Chapter 1, the conceptual shift is comparable to that of the Copernican Revolution in the 16th Century. In scale, the Environmental Revolution is comparable to the Agricultural and Industrial Revolutions that preceded it.

The Industrial Revolution has been under way for two centuries, although in some countries it is still in its early stages. At its foundation was a shift in sources of energy from wood to fossil fuels, a shift that set the stage for a massive expansion in economic activity. Indeed, its distinguishing feature is the harnessing of vast amounts of fossil energy for economic purposes. While the Agricultural Revolution transformed the earth's surface, the Industrial Revolution is transforming the earth's atmosphere.

The additional productivity that the Industrial Revolution made possible unleashed enormous creative energies. It also gave birth to new life-styles and to the most environmentally destructive era in human history, setting the world

firmly on a course of eventual economic decline.

The Environmental Revolution resembles the Industrial Revolution in that each is dependent on the shift to a new energy source. And like both earlier revolutions, the Environmental Revolution will affect the entire world.

There are differences in scale, timing, and origin among the three revolutions. Unlike the other two, the Environmental Revolution must be compressed into a matter of decades. The other revolutions were driven by new discoveries, by advances in technology, whereas this revolution is being driven more by our instinct for survival.

One big difference between the investments in fossil fuels and those in wind power, solar cells, and geothermal energy is that the latter will supply energy in perpetuity. These "wells" will not run dry. If the money spent on oil in one year were invested in wind turbines, the electricity generated would be enough to meet one-fifth of the world's needs.

Investments in the infrastructure for the new energy economy, which would eventually have to be made as fossil fuels are depleted, will obviously be huge. These include the

Lester R. Brown is President, Earth Policy Institute, a non-profit, interdisciplinary research organisation based in Washington D.C. He is also the founder and former president of the Worldwatch Institute. He is the recipient of numerous prizes including the MacArthur "Genius Fellowship", the United Nations Environment Prize and Japan's Blue Planet Prize.

Eco-Economy: Building an Economy for the Earth, Lester R. Brown, Orient Longman, 2002, Rs. 150

Renewable energy holds key to development

HT Correspondent
New Delhi, February 8

IF YOU want to understand why activists supporting 'sustainable development' throw in their lot behind 'renewable energy', head towards Indira Gandhi International airport. For two months now, Delhi Traffic Police have been operating a solar powered traffic light in place of the traditional electricity guzzling lights.

The electricity saved, claim traffic officials, is enough to illuminate at least eight houses.

It's these kind of achievements that world leaders, environmentalists, scientists and policy framers would like replicated across underdeveloped regions of the world as they head for discussions over the next three days at the Delhi Sustainable Development Summit.

Speaking at the inaugural session of the summit this evening, Prime Minister Atal Bihari Vajpayee set the tone for the discussions. "We in India have taken many steps to reduce pollution and thereby lessen our contribution to climate change

In particular, we have extensively supported the use of renewable energy."

The observations of Dr Jan Pronk, Special Envoy for the United Nations Secretary General shared a common thread. "Development has to be undertaken keeping in mind the capacity of the earth. Because we have only one planet we owe it to the people, the planet and to prosperity."

The sustainable development summit being held in New Delhi comes as a precursor to the Johannesburg 'World Summit on Sustain-

able Development' scheduled for August 2002. World leaders will go to Johannesburg with report cards of the work done for sustainable development as laid down in the Rio declaration in 1992.

Here's a closer look at the stakes involved for a country like India in sustainable development. With an oil pool account deficit threatening to touch a whopping Rs 145 billion by March 2002, the need to develop technologies like wind-energy, solar cells, hydrogen generators and fuel cell engines is being felt more than ever before.

UN envoy is here to get PM for SA green meet

SONU JAIN

NEW DELHI, FEBRUARY 9

HE is a man on a mission. Jan P Pronk, special envoy for the UN Secretary General to the World Summit on Sustainable Development, arrived here this morning.

"I have been sent by the Secretary General to meet the Prime Minister and tell him he should be representing the conference in Johannesburg himself and not just send representatives from the Environment Ministry," he said.

Johannesburg will hold the

conference held in 1992 and to prepare an agenda for the next 10 years.

According to him, all governments have to see it as not just a summit on environment but on a more holistic one. "It is about economics, trade, politics and law, so it is fitting that India be represented by its highest office," he said.

He is also participating in the three-day international summit organised by TERI which will prepare a document to be formally submitted to the UN's Johannesburg summit. His agenda includes visiting other countries and meeting heads of other Ministries such as External Affairs and Finance.

The reason why he wants to point this out to the Indian government because India is a "very big player" among developing Nations and "should not forget its role."

"I was Minister for Development in the Dutch government and went to Rio on demand from developing countries who said that they did not just want to talk on environment but on other issues which they face like eradicating poverty."

Rio was the first big environment summit and was followed by protocols such as Kyoto and on biodiversity but Johannesburg is expected to shift the focus from environment to other developmental issues such as trade and education.

"India can be a model country because within its boundaries it has all these problems which need to be addressed and has already found ways to deal with," he said. That way, India was already "sustainable."

'We are losing the war to save the planet'

CHECKING IN

"Sumerians probably thought of themselves to be as invincible as we do now"

Washington-based Earth Policy Institute president Lester Brown on development

SANGEET KUMAR
NEW DELHI, FEBRUARY 8

THE *Washington Post* has termed him "one of the most influential thinkers" of this century. **Lester Brown**, president of Washington-based Earth Policy Institute, is not happy about the way the world is moving in its quest for development. "We are losing the war to save the planet," he says pointing at a graph which shows a sharp rise in global temperatures in the past decade. He then points at another graph showing a rise in the amount of atmospheric carbon dioxide levels and adds "This is not a coincidence."

On his visit to Delhi

I had invitations for the World Economic Forum in New York and for the Sustainable development Summit here — but I chose to come here because I thought this was more important. The direction in which this world is moving will lead to depletion of re-

sources and we have to find a way in which development remains sustainable. This summit, I believe, is important because it addresses the issue of making development sustainable.

On the challenges facing mankind.

History is replete with instances where civilisations have perished because their development was not in harmony with the environment. The Sumerian Civilisation one of the most advanced civilisations during its time. Their irrigation system however had a flaw, which slowly caused the water table to rise and render the soil barren. That's how they perished. We have to learn from these instances and realise that the Sumerians probably thought themselves to be as invincible as we do right now.

Our populations are rising alarmingly and the ice caps are melting. There is a strained relation between nature and mankind. Forests are depleting and species are disappearing. I think time is

running out for us.

On alternative energy

We have to discover newer energy sources. The previous century may have belonged to fossil fuels but this one belongs to alternative energy sources like the wind and sun. Fifteen years ago it cost 35 cents to produce 1 KW of electricity but today the cost is down to four cents. In future, solar energy will electrify those villages in third-world countries which are not connected to the grid. For the two billion people in the world who do not have access to electricity at present, solar energy and small fuel cells are the best way ahead.

On making development sustainable.

We have to begin by pricing things right. The price of a litre of petrol in-

cludes the cost of pollution involved because of the pollution it creates. Similarly the cost of paper has to reflect all the costs of felling a tree. One instance where it happens is the price of cigarettes in the United States. Unless we price things correctly and include the ecological price we will not know the real value of things.

On a road map for India.

I think India needs to focus on smaller families. The country has definite assets in the form of a large labour force and an educated English speaking population. A very large population however may be undermining all the progress it is making in the fields of Information Technology. There is also a need here to reform the tax system by which you reduce the Income Tax and increase tax on polluting activities. It has been done successfully

in Germany.

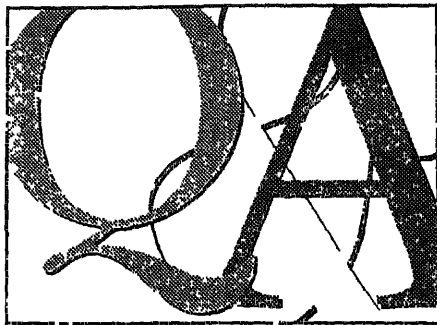
The challenges ahead.

We have got some challenges ahead but for once, we also know what to do. The reforestation in South Korea, the water efficiency in Israel, the recycling of paper in Germany and the recycling of scrap into steel in the United States are all signs that there is hope. Moreover, we have the advantage of technology which we did not have some years back.



AMIT MEHRA

'Eradication of poverty, hunger and illiteracy are pivotal for sustainable development'



TRBAALU

*THE conference boasts of the participation of a who's who of the development world. Little wonder, the ongoing Delhi Sustainable Development Summit 2002 (DSDS 2002) in the Capital is billed to set the pitch for the developing world at the forthcoming United Nations World Summit on Sustainable Development in Johannesburg. Organised by Tata Energy Research Institute (TERI) in partnership with the Ministry of Environment and Forests, the conference will conclude with the adoption of the Delhi Declaration. In an interview with **Rajiv Tikoo**, the Union Minister of Environment and Forests, T R Baalu, says that the outcome of DSDS 2002 will reflect the aspirations of millions of people in the developing world and form the basis for further negotiations at Johannesburg. Excerpts*

What kind of involvement does the Indian government have with the Delhi Summit on Sustainable Development 2002 (DSDS 2002)?

The DSDS 2002 is jointly hosted by the Ministry of Environment and Forests (MoEF), TERI and other partners. The theme of the Summit 'Ensuring Sustainable Livelihoods. Challenges for Governments, Corporates and Civil Society' is very relevant to the forthcoming World Summit on Sustainable Development (WSSD) at Johannesburg. As ministers and leaders from other countries are expected to participate in DSDS 2002, I look forward to this opportunity to build a consensus among developed and developing countries on various issues of common concern.

While TERI is spearheading the preparation for the WSSD, the government seems to have taken a backseat. Why is it so?

My ministry is spearheading national efforts in preparing for the WSSD. In this process, we are involving other ministries, state governments,

industrial associations, NGOs, individual experts concerned and other arms of civil society. We believe in partnerships. As a case in point, DSDS 2002 is the result of one such partnership between MoEF and TERI. In addition to TERI, a number of other leading NGOs and experts are providing inputs to my ministry to ensure that India is fully prepared for the Johannesburg Summit.

What is the kind of preparation that is going into firming up the stand that India is going to take at the WSSD?

I would like to make a distinction in preparations for the WSSD under two categories. First, an internal stock-taking by way of adequacy of our own efforts in environment conservation and second, finalising our stand for international negotiations. Under the first category, we are amidst a process in assessing our performance on the baseline of Agenda 21 in selected thematic areas. This step is expected to lead to a comprehensive national strategy for sustainable development.

During the Tenth Plan, we propose to assist all the state governments in coming out with their respective State of Environment (SoE) Reports. These reports will be prepared in a manner to guide the policy-makers in decision-making, keeping in view the environmental dimension of development. We are planning to bring out a National Environment Action Plan (NEAP) as our agenda for future action. A comprehensive document 'India on the path to a Sustainable Future,' highlighting the success of various initiatives is also under preparation.

In addition to these initiatives, we are also organising a series of multi-stakeholder consultations at the regional and national levels. At the international level, we are participating in a number of preparatory meetings to build a common ground among nations to move forward. On behalf of developing countries, India has succeeded in taking a proactive approach on the WSSD-related issues. To tap the full potential of Internet, we have initiated a web enabled discussion board. Readers may log on to the website www.wssdindia.org to get further details on the national level preparations. At a personal level, I am closely monitoring progress of the preparatory process for the WSSD.

What will be the thrust of India's official position at the WSSD?

India would like to carry a strong message to the WSSD stating that eradication of poverty, hunger and illiteracy from the face of this earth are pivotal



to our march towards sustainable development. We, in developing countries, have done our best within available means. However, if the vicious cycle of poverty and under-development has to be broken, I feel that national efforts in the developing countries have to be necessarily complemented by international cooperation. Availability of environmentally sound technologies still remains a big question mark. Similarly, during the last decade, official development assistance, especially for conservation of environment and management of natural resources, is showing a downward trend. In the WSSD, we would like to emphasise on the developed countries to honour their promises and commitments made at Rio in this regard.

Will the Indian official position reflect the Delhi Declaration, which is likely to be finalised at the TERI Summit?

I am sure DSDS 2002 will be able to arrive at solutions that will be considered seriously at

Johannesburg. The outcome of DSDS 2002, no doubt, will reflect the aspirations of millions of people in the developing world and form the basis for further negotiations.

At times, the developed and the developing world have been taking opposing stands on environmental issues. For example, on the Kyoto Protocol. What is the kind of leadership role you envisage for India in rallying the developing world to protect its interests?

As you know, international environmental negotiations are very complex and countries tend to safeguard their respective positions. However, environment, like peace, is indivisible. Now the time has come to leave behind narrow parochial considerations and come out with a clear-cut plan of action on various issues related to sustainable development. India is working hard to evolve a common consensus between the developing and developed countries. In this regard, on the basis of

the principle of 'Common but Differentiated responsibilities', the developed countries have to take a stronger action to curb their consumption patterns and to fulfil their commitments for transfer of new and additional resources and environmentally sound technologies to developing countries.

There is a perception in certain circles that Rio was a failure. How are the issues being addressed so that the Johannesburg Summit, too, does not meet the same fate?

It is incorrect to say that Rio was a failure. The United Nations Conference on Environment and Development (UNCED) came out with Agenda 21 and the Rio principles, which are still a guiding force for the international community. The UNCED has identified a number of key areas for action such as climate change, biological diversity and desertification. However, efforts made by the international community during the last decade are grossly inadequate keeping in view the dimensions of the issues involved.

There is a broad consensus on various issues such as eradication of poverty, hunger and illiteracy, and for adopting sustainable consumption patterns, etc. These concerns had also been articulated in the Millennium Goals of United Nations. The only question is how to attain these goals. I hope the Johannesburg Summit comes out with recommendations for setting in motion international regimes for local, national, regional and global capacity building and to design systems of accountability on the basis of equity and fair play.

How integral is environment to your vision of India?

Development, which ensures a dignified life for the last man in the country, is our basic concern. However, without adequate environmental safeguards, one cannot achieve any degree of development whatsoever. I, therefore, feel that in the years to come, environmental issues have to be further mainstreamed in the decision-making process at various levels in all the sectors of our socio-economic life.

What are the challenges for India ahead?

There is tremendous pressure on natural resources in the country — be it water, land, or biodiversity. Our biggest challenge is to sensitize and strengthen the capacity of various institutions engaged in the management of natural resources.

Rich nations' curbs intensifying poverty

Press Trust of India

New Delhi: Coming down heavily on rich nations, Prime Minister Atal Behari Vajpayee on Friday night warned that restrictions on the free movement of goods and services in the name of environment or child labour would only intensify poverty in the developing world.

"We cannot make the poor and the deprived wait any longer in their aspiration to live a better life and this is the first and foremost task in sustainable development," Vajpayee said while inaugurating the second Delhi sustainable development summit 2002 here. "Our conference and debates are pointless without a clear recognition and acceptance of this ulti-

mate ethical responsibility for those of us who have been voted into the government by the poor and for those in business and the professions whose privileges are sustained by the labour of the poor," he said.

He said the developed world must give resources, directly through higher aid and indirectly by opening their markets to poorer nations. "This form of indirect support is one way of making globalisation work for the poor," he said. Recalling that the secretariat of the Rio summit had estimated that a sum of \$600 billion would be required to implement

'Agenda 21' strategy in the developing countries, the Prime Minister said poor countries were expected to generate two-thirds of these resources themselves. "The balance has to come from the developed world but they are not even fulfilling this lesser obligation. Clearly they must give more resources directly through higher aid and indirectly by opening their markets to the poorer nations." "Therefore, imposing environmental or labour restrictions on the free movement of goods and services, in the name of selective aspects of sustainable development such as the environment or

child labour, will only intensify poverty in the developing world," he said.

POLLUTION CONTROL

Vajpayee asked the developed countries to take stringent steps in controlling pollution. "The per capita consumption of natural resources in developed countries, as compared to developing countries, is generally of the order of 20 to one. In absolute and relative terms, such consumption of natural resources is inherently unsustainable," he said. The Prime Minister also expressed concern that the Kyoto protocol on reducing

greenhouse gas emissions were not being implemented quickly by the industrialised countries. He said India had taken many steps to reduce pollution and thereby lessen its contribution to climate change. Recalling Mahatma Gandhi's principle of 'Antyodaya' to take care of the most underprivileged and deprived, Vajpayee called for debating his suggestion on levy on capital transactions across industrialised countries and capital repatriations from developing countries for several specific poverty-alleviation initiatives. Several international experts were attending the three-day summit. The summit is being organised by Tata energy research institute (Teri) and other organisations.

PM moots levy on Rich for using global natural resources

Our Economic Bureau
New Delhi, Feb 8

PRIME Minister Atal Bihari Vajpayee has suggested imposition of specific multi-lateral levies on global natural resources used by the rich nations to raise resources for funding sustainable development efforts of the poor nations.

Inaugurating the three-day 'Delhi sustainable development summit 2002', being organised by the Tata Energy Research Institute (TERI) here on Friday, Mr Vajpayee said such levies could be imposed on resources like electromagnetic spectrum and marine fisheries.

He further reiterated his idea of imposing a levy on capital transactions across industrialised countries, and capital repatriations from developing countries for several specific poverty-alleviation initiatives. He added that the idea, originally mooted by him last year, deserved to be considered afresh in view of the crisis which had hit the Asian region.

Mr Vajpayee also made it clear that imposing environmental or labour restrictions on free movement of goods and services, in the name of selective aspects of sustainable devel-

opment such as the environment or child labour, "will only intensify poverty in the developing world."

Recalling the Rio Summit, he said, it was then estimated that \$ 600 billion would be required to implement Agenda 21 by the developing countries. Poor countries were expected to generate two-thirds of the resources themselves, while the balance was to be provided by the developed world.

Mr Vajpayee regretted that the developed world even failed to fulfill its lesser obligation. "Clearly, they must give more resources, directly through higher aid and indirectly by opening their markets to poorer nations. This form of indirect support, making globalisation 'poor', he stressed.

Stating that poverty is multi-dimensional and extends beyond money incomes to education, health care, skills enhancement, and political participation at all levels from the local to global, Mr Vajpayee hoped that the forthcoming Johannesburg Summit would come up with priority actions and a consensus for harnessing the forces of globalisation and the ensuring a regime of sustainable development with the goal of abolishing poverty. ♦

'Rich nations must keep their word to help out the poor'

EXPRESS NEWS SERVICE
NEW DELHI, FEBRUARY 8

PRIME Minister Atal Bihari Vajpayee today slammed developed countries for "not fulfilling" their obligation to generate resources for sustainable global development and said that "we cannot make the poor and the deprived wait any longer in their aspiration to live a better life".

Inaugurating the "Delhi Sustainable Development Summit 2002" organised by the Tata Energy Research Institute (TERI) here, the Prime Minister said that the per capita consumption of resources in developed countries as compared to developing nations is of the 20:1 which "is inherently unsustainable".

Developed countries have failed to contribute one third of an amount of 600 billion dollars as estimated by the Rio summit for implementing its Agenda 21, Vajpayee charged.

"Clearly, they (developed countries) must give more resources, directly through aid and indirectly by opening up their markets to poorest nations — one way of making globalisation work for the poor," he said.

At the end of the summit, being attended by more than 400 delegates from across the globe, a "Delhi Declaration" is likely to be issued. This will be submitted to the UN World Summit on Sustainable Development to be held in Johannesburg later this year.

Speaking on the occasion, Union Environment and Forest

New energy policy

■ NEW DELHI. TERI also submitted an Integrated Energy Policy for India to the Prime Minister. The main objective of the policy is to bring out the benefits of a coordinated policy for energy.

Suggestions include providing clean and efficient energy to all, improving the efficiency of the energy system, provide security of energy supply and to reduce the adverse environmental impacts of energy use.

Right now, different Ministries govern different energy sub-sectors and the import dependence for energy requirement is about 70-75 per cent.

—ENS

minister TR Baalu said that a decade after the Rio World Conference of 1992, poor countries were facing the formidable task of ensuring sustainable livelihood to millions of people.

The Ministry of Environment and Forests is supporting the meet and it will be attended by two former premiers, nobel laureates, global and national leaders. It aims at recharging the momentum of stakeholders before the Johannesburg summit. A follow-up will be held in Washington later this year.

In his keynote address, United Nations special envoy Jan Pronk said that since the summit focus would not only be on environment but also on economic and social issues, it was important for countries to send their heads of trade and finance.

'Environment-friendly systems need tax sops'

By Sushma Ramachandran 9/2

NEW DELHI, FEB 8. The eminent environmentalist, Lester Brown, has called for restructuring the global economy, including changes in the tax system, to ensure sustainable development

Tax breaks needed to be given to environment-friendly systems and higher taxes imposed on elements that impact on ecology, he said "The market must tell the ecological truth"

Seeking a paradigm shift in the linkage of environment and economy, he said the latter must be viewed as a sub-sector of the eco-system

Here to attend a conference on sustainable development and release his latest book, 'Eco-Economy Building an Economy for the Earth', Mr Brown stressed that developing countries such as India had to prepare their own environmen-



Lester Brown

tal agendas to protect their economies Conceding that developed countries such as the U S had contributed largely to greenhouse gas emissions, he expressed concern over the U S President, George Bush's deci-

sion not to sign the Kyoto Protocol But he was confident that public opinion over the next few years would force any U S President to sign a more effective protocol, he said describing the Kyoto Protocol as "extremely inadequate"

Mr. Brown told *The Hindu* that even developing countries such as China that had opted to use fuels like coal had recognised their impact on atmospheric pollution and general health standards As a result, the use of coal in China had declined by 14 per cent in the last five years

As for the future, he felt that for the first time, the world had the technology to wean itself away from petroleum coming from the politically volatile Middle East. He predicted that a combination of wind turbines, solar cells, hydrogen generators and fuel cell engines would be the main sources of energy sup-

ply in the future. Many fuel companies like Shell had already begun working on hydrogen production and others such as BP on fuel cells. Similarly, Honda and Daimler Chrysler were set to unveil the first hydrogen fuel cell cars in 2003, he said

Mr Brown pointed out that the global economy was out of sync with the ecosystems and collapsing fisheries, shrinking forests and expanding deserts evidenced this In India, for instance, the water table had fallen in the northern states such as Punjab where irrigation is prevalent The increasing stress on the eco-system had in the past caused the decline of major civilisations like the Sumerians This could happen even now, as the world faced threat from increased carbon dioxide emissions "There can be no economy without environment," he warned.



Regional Research Laboratory
(Council of Scientific & Industrial Research)
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CORRIGENDUM - II TO ADVT.NO.5/2001

The following modifications of our above referred press Tender published on 17.01.2002 may be read as follows: 1. The Last Date of issue of Tender Documents extended upto 15.02.2002 (12.30 P.M). 2. The Last Date of T...

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Biggest polluters must curb greenhouse gas emissions: PM

By Our Special Correspondent

DELHI, FEB. 8 The Prime Minister, Atal Bihari Vajpayee, today hit out at developed countries for not doing enough to take forward the movement for sustainable development and emphasised that removal of poverty should be at the core of all efforts for sustainable development.

During a four-day 'Delhi Sustainable Development Summit' (DSDS) organised by the Tata Energy Research Institute as part of the run-up to the World Summit on Sustainable Development to be held at Johannesburg, South Africa, in August, he particularly referred to the "slow and inadequate progress" in operationalising the mechanisms of the Kyoto Protocol on reducing greenhouse gas emissions and their reduction. This, he said, "leaves several doubts on the seriousness of leading industrialised countries to mitigate this problem."

In this regard, the Prime Minister observed that even while India and other developing countries have taken several measures to reduce pollution, the effect of climate change could, however, only get averted, "unless the biggest polluters take effective steps to curb (their) emissions."

Mr Vajpayee also drew attention to the reluctance of the developed world in making their contributions for the implementation of the 1992 Rio Summit's Agenda 21 in developing countries. Pointing out that the developed world was required to bear only one-third of the \$600 billion that was estimated to be needed for implementation of the Agenda, he regretted that "they are not even fulfilling this lesser obligation."

Clearly, he said, there was a need for the developed world to give more resources, both directly through higher aids and indirectly by opening their markets to poorer nations. In this context, he said, imposing environmental or labour restrictions or for that matter limiting the free movement of goods and services in the name of selective aspects of sustainable development would only intensify poverty in developing countries.

Instead, he said, innovative measures must be employed to raise resources to remove poverty. These may include specific multilateral levies on global natural resources used by the rich such as on electromagnetic spectrum and marine fisheries.

Mr Vajpayee also recalled the suggestions he had made last year for a levy on capital transactions across industrialised

countries and capital repatriations from developing countries for specific poverty alleviation initiatives and said the "idea deserves to be debated widely and seriously", especially in view of the crisis in the Asian region a few years ago.

He emphasised that the foremost task in sustainable development was to help the poor and the deprived to realise their aspirations for a better life and wanted the concept of sustainable development to be extended to encompass the rights of all peoples to conservation and furthering their cultural heritage, comprising their history, their historical treasures, their arts, their languages and their societal and family organisation. "The global trading regime and multilateral development agencies should respect and indeed further this broader concept", he added.

The Johannesburg Summit should come up with priority actions and a consensus for harnessing the forces of globalisation and the regime of sustainable development to the goal of abolishing poverty. "If we focus on the challenge faced by the most deprived communities in the world, the world would surely become a better place", he added.



Delhi Sustainable Development Summit 2002

The Financial Express
Delhi, Mumbai
February 9, 2002

DSDS 2002
New Delhi
8-11 February

Ensuring Sustainable Livelihoods: Challenges for Governments, Corporates, and Civil Society at Rio + 10

IT'S going to be one of the most important environmental summits ever held in India. Little wonder, Prime Minister Atal Behari Vajpayee is delivering the inaugural address. Beginning today through February 11, the Delhi Sustainable Development Summit 2002 (DSDS 2002) will focus on *Ensuring Sustainable Livelihoods: Challenges for Governments, Corporates, and Civil Society at Rio+10*. The summit has been organised by TERI in partnership with the DFID, GAIL, Ministry of Environment and Forests, India, and Netherlands embassy CIDA, Coca Cola, IDRC and NTPC are the summit

Towards An Actionable Agenda

associates. While Taj Mansingh and Hyatt are the functional hosts, *The Financial Express* is the media sponsor. The theme is timely considering that the United Nations World Summit on Sustainable Development will be held in Johannesburg between August 26 and September 4, 2002.

The Johannesburg meet will be the decadal follow up of the 1992 Rio Earth Summit, which underlined the imperative of integrating economic growth,

social justice and environmental concerns in a sustainable manner.

In a bid to set the pitch for the Johannesburg summit, the DSDS 2002 will emphasise upon global stakeholders the need to make a concerted endeavour to realise the vision of a safe and just world that fulfils the needs of this and future generations.

Going beyond highlighting the issues and the need for their redressal, the DSDS 2002 will also strive to lay

down priorities as well as a doable action plan for the Johannesburg summit, according to Dr R K Pachauri, director general of TERI.

The Delhi Declaration to be issued at the conclusion of the DSDS 2002 will be formally submitted at the Johannesburg summit. Considering that declaration will be the outcome of the deliberations between the world's who's who on development, it's expected to influence the agenda.

the Johannesburg summit.

Former prime ministers, global and national political leaders, senior government officials, corporate leaders, NGOs, research organisations and academic institutions from all over the world are participating in the DSDS 2002.

Says Dr Pachauri, "The Delhi Declaration will be widely circulated throughout the global community. It is hoped that the intellectual homework conducted at the DSDS 2002 will positively influence the defining of agenda and the priorities at the world meet at Johannesburg."

The Road To Johannesburg



It may be looking back, but that is only to move ahead. Focussing on translating plans into action, the forth-

coming World Summit on Sustainable Development to be held in Johannesburg between August 26 and September 4 will not only assess the results achieved, but also identify the obstacles to progress since the 1992 Rio Earth Summit.

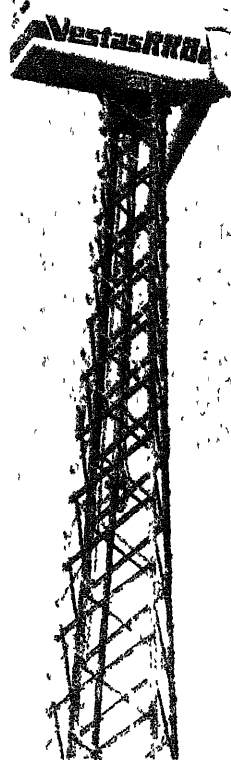
Besides, the summit will aim to serve as a platform to consolidate on the gains made since Rio, and catalyse the impetus for commitment of resources and specific actions towards global sustainability. The summit will bring together thousands of participants, including heads of state and government, national delegates and leaders from nongovernmental organisations, businesses and other groups.

The agenda for sustainable development adopted at the Rio Summit (Agenda 21) will serve as the basis for action. A global action plan for sustainable development, Agenda 21 integrates environmental, economic and social concerns into a single policy framework. It comprises over 2,500 recommendations for action, including detailed proposals on how to reduce wasteful consumption, tackle poverty, protect the atmosphere, oceans and biodiversity, and promote sustainable agriculture.

It's this long-term vision for sustainable development that makes Agenda 21 a valid basis for action despite the progress on its implementation leaving much to be desired even 10 years after its adoption. "Agenda 21 needs to be revisited and redefined, though," adds Ravi Aggarwal, chief coordinator of Shristi, a Delhi-based nonprofit.

In fact, inputs to make Agenda 21 actionable have already started to come in from different quarters. Kofi Annan, the secretary general of the United Nations, has already suggested a 10-point action plan to move the sustainable agenda forward at the Johannesburg summit. The suggestions include tackling issues regarding globalisation, poverty eradication, changing unsustainable patterns of consumption and production, health, energy, managing ecosystems and biodiversity, freshwater, finance and technology, initiatives for Africa, and international governance for sustainable development. Evidently, the thrust is on actionable plans.

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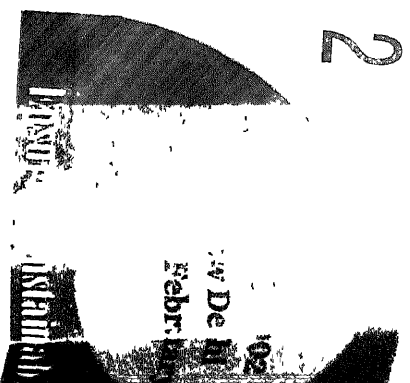
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Defining Sustainable Development Summit 2002

24-26 February 2002
Doha, Qatar

Available Livelihoods: Challenges for Governments, Corporations and Civil Society at 100-1-10

The World Today

■ The world's population reached 6 billion in 2000, significant rise from 1950 when it was 2.5 billion, and 1980 when it was 4.4 billion. The rate of population growth peaked in 1965 at 2 per cent and is now declining.

■ Only 15 per cent of the world's population, in high-income countries, accounts for 56 per cent of the world's total consumption, while the poorest 40 per cent, in low-income countries, account for only 11 per cent of consumption. While most people consume more today, the consumption expenditure of the average African household is 20 per cent less than it was 25 years ago.

■ The overall poverty rate in developing countries, based on an income poverty line of \$1 per day declined from 29 per cent in 1990 to 23 per cent in 1998. The total number of people living in poverty dropped slightly from 1.3 to 1.2 billion. Substantial progress in reducing poverty has been achieved in East and Southeast Asia through rapid economic growth, and some success has been achieved in South Asia and Latin America. Virtually no progress was made in sub-Saharan Africa, where almost half the population lives in poverty.

■ By 2005, it is estimated that about 54 per cent of the population in developing countries will reside in urban areas. As the number of people moving to urban areas increases, so does the number of poor people living in cities. In Africa, over 40 per cent of urban households live in poverty.

■ There are at least 1.1 billion people who still lack access to safe drinking water and 2.4 billion who lack adequate sanitation.

■ More than 8 per cent of children in developing countries still die before the age of five, and in some of the poorest countries, one in five children dies before his/her first birthday. More than 113 million school-age children in developing countries are not in school, over 60 per cent of them girls.

■ About 815 million people in the world are undernourished—777 million of them in developing countries, 77 million in transition countries, and 11 million in industrialised countries. Hunger in South Asia, where it is most prevalent, is declining, while in Africa about one third of the population is undernourished and the numbers are increasing.

■ HIV/AIDS has rolled back life expectancy in some countries to pre-1980 levels, and in 9 countries, life expectancy declined by 6.3 years. There are 36 million people living with HIV/AIDS, 95 per cent of them in developing countries, and 25 million of these people live in sub-Saharan Africa. More than 12 million have died of AIDS and 13.2 million children have been orphaned.

(Source: UNICEF)

Private Views, Public Issues



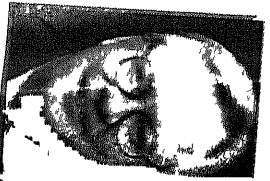
ALAN LAMBERT, Senior Adviser, Environment and Development Cooperation, Ramsar Convention Bureau, Switzerland

“Growing economies stand to benefit from technology leapfrogging. The absence of costly technology lock-in facilitates the birth of original solutions and adoption of advanced technology.”

UMBERTO COLOMBO,
Former Minister of Universities, Science and Technology, Italy



“Meeting the unmet needs of the world's poor can represent new business opportunities. Sustainable business can be the best argument in favour of greater market liberalisation.”



BJORN STIESON, President, World Business Council for Sustainable Development, Switzerland

“The South cannot be expected to take on emission reduction commitments until the developed world reduces its own emissions and fulfills commitments to assist DCs.”

ELLIOT DIRINGER, Director, International Strategies, Pew Center on Global Climate Change, USA

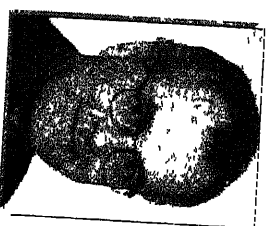


JOHN SKERRITT, Deputy Director, R&D, Australian Centre for International Agricultural Research

“Agricultural R&D must address the issue of sustainable production. India and Australia have been actively collaborating in areas of agricultural production and natural resource management.”

“The goal of an environmentally sustainable economy cannot be compromised. We have to restructure the tax system so that market prices reflect the ecological costs.”

LESTER R. BROWN,
President, Earth Policy Institute, United States of America



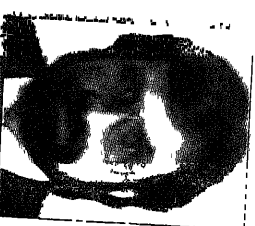
MICHAEL Z. CUTAJAR, Former Executive Secretary, United Nations Framework Convention on Climate Change Secretariat, Germany

“An agreement on global efficiency standards by a dozen manufacturers located in both the developed and developing world will help address North-South competitiveness issues.”



HANNS MICHAEL HOELZ,
Managing Director, Deutsche Bank

“The bank's philosophy is to think global, act local. Globalisation allows our employees to take our ideas and implement them in the communities they are a part of.”

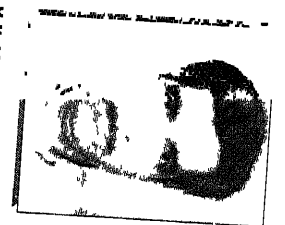


NEBOJSA NAKICENOVIC, Project Leader, Transitions to New Technologies, International Institute for Applied Systems Analysis, Austria

“DCs should have a balanced portfolio of technology options ranging from near-term and quickly diffusible changes to longer-term and radical ones.”

“Forty developing countries, home to 2 billion people, stand to suffer severe production losses due to climate change. The world community must equitably meet this inequitous challenge.”

GUNTHER FISCHER, Project Leader, Land Use and Land Cover Project, International Institute for Applied Systems Analysis



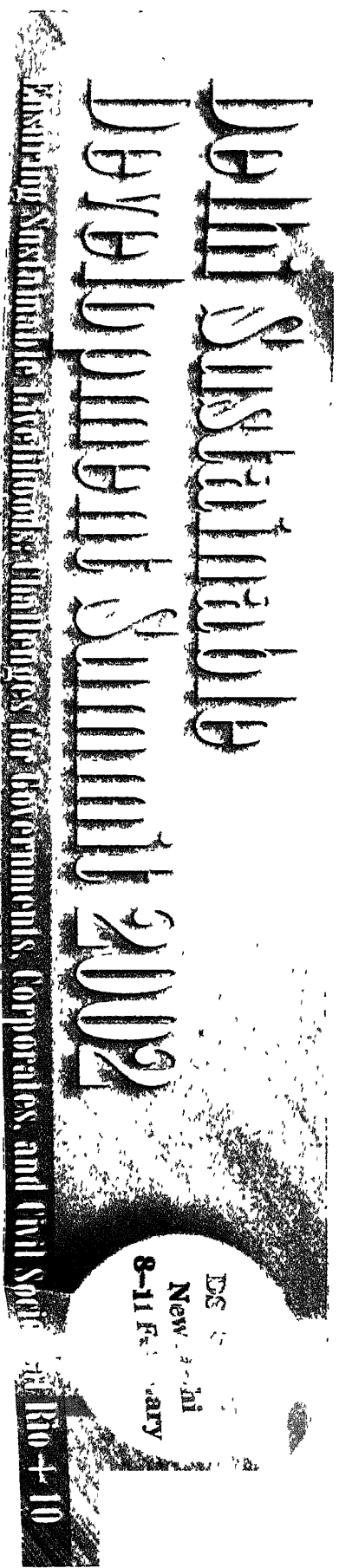
Y. K. ALAGH,
Former Union Minister and member of Parliament, India

“Community based projects have promoted sustainable development in India. The challenge facing us is to replicate these success stories on a larger scale.”

“Technology plays a key role in meeting the world's socio-economic and environmental needs. Our tech strategy helps us define relevant targets and develop appropriate products.”

THOMAS M. CONNELLY, JR.,
Chief Science and Technology Officer, DuPont Inc., US





TERI is arguably among the more influential Indian non-governmental organisations today. Primarily through its research activities, TERI has carved a niche for itself in the fields of energy, environment and sustainable development, both at home and abroad. Its presence in New Delhi, Bangalore, Goa and Guwahati and in Germany, Moscow, Japan, UK and the US are testament of its success.

Doubtless, the leadership of Rajendra K Pachauri has been instrumental in TERI's emergence as a respected

Go Green, Get Richer!

INDIAN corporates recently got a chance to show off their green credentials when they competed for the first-ever Corporate Environmental Awards, 2002 instituted by TERI in association with The Financial Express.

To be given out in April, the awards will laud three Indian corporates who have best integrated sustainability elements in their corporate strategy. An eminent panel of judges comprising of Justice J S Verma, Chairperson, National Human Rights Commission, HR Vera Machado, the Brazilian Ambassador to India, V Anand, Secretary, Ministry of Small Scale Industries, Dr Gowher Ruzvi, Representative Ford Foundation, India, Dr Suman Bery, DG National Council for Applied Economic Research, Dr Sanjaya Baru, Editor, The Financial Express, and Dr R K Pachauri, DG TERI will evaluate specific practices and technologies adopted by companies along with their overall leadership in addressing environmental concerns.

While entrants have complied with existing national standards, appointed environment auditors and put in place ISO 14001 compliant environment management systems, the concept of sustainable development is yet to take off in a big way. This shows up in the lukewarm response—at least 500 entries were expected, but 89 were received—to the awards and the skew in company profiles. No less than 76 companies boast an annual turnover in excess of Rs 100 crore.

The good news is that apart from the traditional polluters such as the ferrous, cement, textiles, steel, chemicals, oil, and paper industries—who could logically be expected to face greater public pressure and thus embrace the green cause vociferously—sectors such as the watch and jewellery, beverages, and fast moving consumer goods are also beginning to go green.

Pachauri admits that corporates mostly respond to external factors such as improved judicial intervention and fear of bad PR. Which is why, in making the economic benefits accrued to the organisation an important criterion for judging the success of the programme implemented, the awards have sent out an important message. It's only when corporates realise that improving the efficiency of resource utilisation translates into a healthier bottomline will another green revolution—this time in corporate boardrooms—unfold. ♦

Global Vision, Local Focus

think-tank Armed with a double PhD in industrial engineering and economics and phenomenal networking abilities, the director-general has led his 500-strong staff in formulating and implementing a global vision—that of providing innovative solutions to make sustainable development a reality. The Delhi Sustainable Development Summit 2002 is but a natural outcome of this global vision.

But TERI has a local presence too.

From holding conferences so as to sensitise decision makers on viable 'green' budget options to providing environment-friendly solutions to rural energy problems, undertaking forest conservation efforts among local communities and advancing solutions to growing urban transport and air pollution problems, the institution takes its role in formulating national-level strategies, capacity building, and education seriously.

Thus belief that civil society participation holds the key to a sustainable environment movement is reflected in the Community Adoption and Monitoring Programme for Schools wherein school students interact with local residents in order to devise ways to improve the local environment. And with its School of Advanced Studies, TERI intends to churn out trained professionals who will take forward the green movement in years to come.

TERI has also become a relevant player in the burgeoning movement of social responsibility—it promotes the adoption of eco-friendly business processes through initiatives such as the Corporate Roundtable on Development of strategies for the Environment. It has brought together twenty corporates which identify key areas of fields of industrial sustainability to work with TERI researchers to develop appropriate solutions for the industry. ♦

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Delhi Sustainable Development Summit 2002

10-11 February 2002
New Delhi
8-11 February

Ensuring Sustainable Livelihoods: Challenges for Governments, Corporates, and Civil Society at Rio + 10

'We Want Our Message To Be Powerful, Positive And Proactive'

Dr R K Pachauri is respected the world over for his wide-ranging expertise in the critical facets of sustainable development. As director general of TERI, he has turned it into a premier research institute. Today, TERI provides support in energy, environment, forestry, biotechnology, and resource conservation to governments, institutions and corporates worldwide. In an interview with The Financial Express, he talks about the forthcoming Delhi Sustainable Development Summit 2002 and its relevance. Excerpts

What is the significance of the Delhi Sustainable Development Summit 2002 (DSDS 2002)?

We believe that DSDS 2002 has unique significance for three distinct reasons. Firstly, this is the 10-year milestone after the Rio Summit. The output from DSDS 2002 is expected to provide some valuable inputs for the Johannesburg Summit.

Secondly, in this century, when the challenge of sustainability would be the guiding principle for all global action, it is necessary for India to take a prominent place in articulating what human society should do in this context. Thirdly, there is a need for a forum where leaders and thinkers of distinction meet regularly to fashion a global agenda for action which might help to stave off disaster that is otherwise likely to overtake this planet and all species that survive on it today.

Are you doing the government's job?

We are proud citizens of the world's largest democracy. The challenges that the government faces are challenges that this society faces. The task of creating a just and sustainable pattern of development is one that governments round the world must embrace as much as should civil society.

We are not usurping action from the government. We are merely extending our partnership in action that Indian society as a whole must take in a concerted manner. Partnerships will be the key in this arena in the coming years, and a responsible institution like TERI, which has a national focus but a global spread, cannot shirk its responsibility in this hour of impending global crisis.

To the extent that we can act on behalf of Indian society we are also acting on behalf of the Indian government. The work of the government is everybody's work, and we are happy

and proud to be part of it.

The DSDS 2002 is expected to conclude with the finalisation of Delhi Declaration. What will be its thrust areas?

The thrust in the DSDS 2002 would be to highlight the requisites for creating sustainable livelihoods in the world, and to point out where and how the global community has failed in this regard, and what needs to be done at Johannesburg to move ahead towards this neglected goal of everyone achieving livelihoods that are sustainable. We want our message to be powerful, positive and proactive. We must look ahead and move ahead.

Why do you think that the government will include your recommendations in its official documentation?

We are not looking forward to hav-

We believe TERI is seen as a voice of reason and a source of objective analysis and balanced positions. We also have very close links with a number of NGOs and academic institutions around the world. Any event that we organise at Johannesburg would represent a collective and collaborative effort. Hence, we believe that if we put in the right effort, what we say will be heard by most.

What is it that has given you the clout to rope in a who's who from all over the world as speakers at the DSDS 2002?

Over the years TERI and I, personally, have upheld the importance of knowledge as a driver of whatever we do and whatever we produce. We are active in policy analysis, but not aggressively involved in pushing any dogma or unenlightened policy advocacy. We believe in creating objective analysis of policies, based on which we promote policy dialogue with the various stakeholders not only in India but internationally. That is why people of some eminence from round the world respond to our call when we need their knowledge, experience and their attention in our professional events. There is a mutual respect which brings us together.

Since you are getting prominent speakers from all over the world, how would the Delhi Declaration retain the Indian subcontinental perspective?

By involving the outside world we would be enhancing the credibility of whatever we say. We are focussing on global issues, but naturally they would take on an Indian flavour. The problems of India are not too different from those of Bangladesh or from those of Peru at a certain level. We are dealing with global problems and addressing a global audience. The subcontinent is a microcosm of a larger universe that the global community, particularly in the developed world, has never cared to understand or bother about. We hope we can take a small step to correct this historical aberration.

There is a common perception that Rio was a failure. Please comment?

I believe Rio was not a failure. It was a resounding success in that for the first time in human history agreement was reached on such a wide range of important actions so critical for the future survival of the species. What has been a failure is the lack

the summit doesn't meet the same fate as Rio did?

I think Johannesburg has an opportunity to succeed, which does not mean that it will. Firstly, I think all the participants to the Johannesburg Summit will come with some pragmatism, because of the post-Rio disappointments. Secondly, I think after the sad events of September 11 there is a healthy respect for multilateralism on the part of most developed countries. The stronger entity of a more unified Europe is also a good force in favour of success. But it is too early to make any predictions at this stage. ♦



Dr R K Pachauri

ing the government including anything from DSDS 2002 in its own documentation for Johannesburg. But, after all we are not working at cross-purposes with the government. If there is merit in what comes out of DSDS, why would the government not pick it up?

The ministry of environment and forests is after all supporting this summit. They are fully involved in this event at the highest level in the ministry.

You are also making a presentation at the Johannesburg Summit. Since TERI is just one NGO in India, why do you think your recommendations will carry weight?

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Delhi Sustainable Development Summit 2002

The Financial Express
Delhi, India
February 19

DSDS 2002
New Delhi
8-11 February

Civil Society at Rio + 10

IT'S going to be one of the most important environmental summits ever held in India. Little wonder, Prime Minister Atal Behari Vajpayee is delivering the inaugural address. Beginning today through February 11, the Delhi Sustainable Development Summit 2002 (DSDS 2002) will focus on *Ensuring Sustainable Livelihoods, Challenges for Governments, Corporates, and Civil Society at Rio + 10*. The summit has been organised by TRIL in partnership with the DFID, GAIL, Ministry of Environment and Forests, India, and Netherlands embassy, CIDA, Coca Cola, DRC and NTPC are the summit

The Road To Johannesburg



It may be looking back, but that is only to move ahead. Focussing on translating plans into action, the forthcoming World Summit on Sustainable Development to be held in Johannesburg between August 26 and September 4 will not only assess the results achieved, but also identify the obstacles to progress since the 1992 Rio Earth Summit.

Besides, the summit will aim to serve as a platform to consolidate on the gains made since Rio, and catalyse the impetus for commitment of resources and specific actions towards global sustainability. The summit will bring together thousands of participants, including heads of state and government, national delegates and leaders from non-governmental organisations, businesses and other groups.

The agenda for sustainable development adopted at the Rio Summit (Agenda 21) will serve as the basis for action. A global action plan for sustainable development, Agenda 21 integrates environmental, economic and social concerns into a single policy framework. It comprises over 2,500 recommendations for action, including detailed proposals on how to reduce wasteful consumption, tackle poverty, protect the atmosphere, oceans and biodiversity, and promote sustainable agriculture.

It's this long-term vision for sustainable development that makes Agenda 21 a valid basis for action despite the progress on its implementation leaving much to be desired even 10 years after its adoption. "Agenda 21 needs to be revisited and redefined, though," adds Ravi Aggarwal, chief coordinator of Shristi, a Delhi-based nonprofit.

In fact, inputs to make Agenda 21 actionable have already started to come in from different quarters. Koif Annan, the secretary general of the United Nations, has already suggested a 10-point action plan to move the sustainable agenda forward at the Johannesburg summit. The suggestions include tackling issues regarding globalisation, poverty eradication, changing unsustainable patterns of consumption and production, health, energy, managing ecosystems and biodiversity, freshwater, finance and technology, initiatives for Africa, and international governance for sustainable development. Evidently, the thrust is on actionable plans. ♦

Towards An Actionable Agenda

associates. While Tej Mansingh and Hyatt are the functional hosts, *The Financial Express* is the media sponsor. The theme is timely considering that the United Nations World Summit on Sustainable Development will be held in Johannesburg between August 26 and September 4, 2002.

The Johannesburg meet will be the decadal follow-up of the 1992 Rio Earth Summit, which underlined the imperative of integrating economic growth,

social justice and environmental concerns in a sustainable manner. In a bid to set the path for the Johannesburg summit, the DSDS 2002 will emphasise upon global stakeholders the need to make a concerted endeavour to realise the vision of a safe and just world that fulfils the needs of this and future generations.

Gong bey and highlighting the issues and the need for their redressal, the DSDS 2002 will also strive to lay down priorities as well as an action plan for the Johannesburg summit, according to Dr R K director general of TRIL.

The Delhi Declaration at the conclusion of the Johannesburg summit will be formally submitted to the deliberations of the world's who's who on agenda at the world meet at Johannesburg. ♦

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TERI to present energy policy to PM

HT Correspondent
New Delhi, February 6

INDIA STANDS poised to usher in its first-ever 'Integrated Energy Policy' when world leaders, environmentalists and corporate bigwigs sit across the table at the Delhi Sustainable Development Summit this weekend.

The summit organisers, Tata Energy Research Institute (TERI), will be presenting the document detailing energy policy to Prime Minister Atal Behari Vajpayee when he inaugurates the inaugural session of the four-day summit.

TERI Director General Dr R K Pachauri, speaking at a

Press conference here this afternoon, said "We want the energy policy to be a people's document. It should try to answer queries like what we should do about providing energy to the poor, or finding ways of removing the control of large state-controlled corporations over renewable energy sources so as to make them easily available to the needy."

The contours of the document will be left malleable and open to debate, with various bodies associated with environmental issues being invited to contribute their suggestions before the final report is crystallised in six weeks time.

The idea, Dr Pachauri emphasised,

is to realise basic facts like "if everyone used energy more efficiently then the demand for energy would immediately fall," and then act upon the clarity of argument to provide better access to energy resources.

The Delhi Sustainable Development Summit is being touted as a warm-up to the crucial Rio+10 conference on Sustainable Development to be held in Johannesburg in less than six months.

World leaders from 150 countries will be gathering at the global summit to chart the future course of sustainable development and tackle emerging environmental issues.

22/02/2012 21:58

TERI summit in February

Satyen Mohapatra
New Delhi, January 26

ENVIRONMENT MINISTERS of several countries will get together at the forthcoming Delhi Sustainable Development Summit organised by Tata Energy Research Institute (TERI)

The ministers will present their perspectives on crucial issues like climate change, food security, environment, poverty, and technological leap-frogging

TERI Director General R K Pachauri said, "In our summit next month, we have to come out with clear-cut priorities and plan of action. However, we cannot

have a large shopping list for the forthcoming UN World Summit on Sustainable Development in Johannesburg." The Delhi summit, in which both developed and developing countries are scheduled to participate, is not a "ganging up" by the developing countries, Pachauri clarified.

Though the developed countries cannot remain insulated from the problems of the developing countries, particularly after September 11, he added.

The Delhi summit next month (from February 8 to 11) is an attempt to influence international opinion prior to the Summit in Johannesburg in

TERI's three-day meet to begin on February 8

EXPRESS NEWS SERVICE

NEW DELHI, JANUARY 4

TATA Energy Research Institute (TERI) today announced the schedule of the second meet on sustainable development, 'Ensuring sustainable livelihood: Challenges for governments, corporates and civil society' to be held next month.

The first summit held last year had the theme 'Poverty: The global challenge for governments, industry, scientists and civil society'.

This year, the summit will be held with the aim of preparing a declaration for the Rio+10 Summit to be held in Johannesburg in September. "The expectations from the Rio Summit were high but the subsequent events have not lived up to them," said TERI Director General Dr R. K. Pachauri.

The declaration will be made with the aim that it finds some place in the official stand of the Indian government, he said. The three-day summit will be inaugurated by Prime Minister Atal Behari Vajpayee on February 8. The summit will be attended by some of the biggest names in just about every field. "Because of the diverse backgrounds and nationalities of

the participants, the declaration would not just be about some poor developing nations making a statement against the developed world," said Pachauri.

An important theme for discussion during the summit will be the Agenda 21 which was also deliberated upon during the Rio Summit. In all there will be 11 plenary sessions. Each speaker will be able to speak for eight minutes, "in order of keeping the duration of each speaker for eight minutes was to facilitate more discussion with the floor."

The summit will be attended by the foreign minister of various countries including Canada, India, Sweden, South Africa and Netherlands. Apart from the environment ministers, the other speakers on the issue will be John Prescott, the first secretary of state and the Deputy Prime Minister of Britain Dr. Jan P. Pronk who apart from being the environment minister of Netherlands is also an office bearer in the organisation committee for Rio+10 and CEO-cum-Chairman, Global Environment Facility, Washington DC. Mohammad T. El-Ashry

UN body may open sub-regional office in India

THE UNITED Nations Office for Project Services (UNOPS) may open a sub regional office in India to service projects in SAARC countries. While a final decision is yet to be taken, the possibility of increasing business in this area suggests that such a possibility may be considered seriously according to UNOPS executive director, Reinhart Helmke.

UNOPS is the United Nations' only entirely self-financing body and receives no contributions from member governments or any other party.

Devoted entirely to project execution, it is a management specialist that works in all substantive areas of UN activity.

For instance, UNOPS was involved in helping Cambodia with getting judges from India to revamp its judicial structure. While it played an important role in the working of truth commission in Guatemala in South America, UNOPS was also involved in specific environment related projects in India. UNOPS helped in the replacement of a system that generated CFC in Eagle Flask factory near Pune with environment friendly equipment.

Incidentally, it is one of the four authorised bodies to implement the Montreal Protocol. According to Reinhart, UNOPS follows a very strict procurement procedure for projects being implemented by it.

Set up in 1995, UNOPS has till now handled business worth \$ 4.5 billion globally. By levying a service of 6 per cent on each project it has earned over \$ 240 million in the last five years.

HTC, New Delhi

